

Game Player Matchmaking

API Documentation

Product Documentation



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API Documentation

History

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Release 3

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Release updates:

Improvement to existing documentation.

New APIs:

- [StartMatchingBackfill](#)

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Improvement to existing documentation.

New APIs:

- [CreateMatch](#)
- [CreateRule](#)
- [DeleteMatch](#)
- [DeleteRule](#)
- [DescribeData](#)
- [DescribeMatch](#)
- [DescribeMatchCodes](#)
- [DescribeMatches](#)
- [DescribeRule](#)
- [DescribeRules](#)
- [ModifyMatch](#)
- [ModifyRule](#)

New data structures:

- [MatchCodeAttr](#)
- [MatchInfo](#)
- [ReportOverviewData](#)
- [ReportTrendData](#)
- [RuleBriefInfo](#)
- [RuleInfo](#)
- [StringKV](#)
- [Tag](#)

Release 1

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New APIs:

- [CancelMatching](#)
- [DescribeMatchingProgress](#)
- [DescribeToken](#)
- [ModifyToken](#)
- [StartMatching](#)

New data structures:

- [AttributeMap](#)
- [MTicket](#)
- [MatchAttribute](#)
- [MatchTicket](#)
- [Player](#)
- [RegionLatency](#)

API Category

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Matchmaking Process APIs

API Name	Feature
CancelMatching	Cancels matching
DescribeMatchingProgress	Queries matching progress
DescribeToken	Queries the token of a Matchcode
ModifyToken	Modifies the token of a Matchcode
StartMatching	Initiates match
StartMatchingBackfill	Initiates a match backfill request

Console APIs

API Name	Feature
CreateMatch	Creates a match
CreateRule	Creates a rule
DeleteMatch	Deletes a match
DeleteRule	Deletes a rule
DescribeData	Views statistics
DescribeMatch	Queries the matchmaking details
DescribeMatchCodes	Queries the created MatchCodes and paginates the query result
DescribeMatches	Queries the matchmaking list and paginates the query result
DescribeRule	Queries the rule details
DescribeRules	Queries the rule set list and paginates the query result

ModifyMatch	Modifies a match
ModifyRule	Modifies a rule

Making API Requests

Request Structure

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1. Service Address

The API supports access from either a nearby region (at `gpm.tencentcloudapi.com`) or a specified region (at `gpm.ap-guangzhou.tencentcloudapi.com` for Guangzhou, for example).

We recommend using the domain name to access the nearest server. When you call an API, the request is automatically resolved to a server in the region **nearest** to the location where the API is initiated. For example, when you initiate an API request in Guangzhou, this domain name is automatically resolved to a Guangzhou server, the result is the same as that of specifying the region in the domain like "`gpm.ap-guangzhou.tencentcloudapi.com`".

****Note:** For latency-sensitive businesses, we recommend that you specify the region in the domain name. ******

Tencent Cloud currently supports the following regions:

Hosted region	Domain name
Local access region (recommended, only for non-financial availability zones)	<code>gpm.tencentcloudapi.com</code>
South China (Guangzhou)	<code>gpm.ap-guangzhou.tencentcloudapi.com</code>
East China (Shanghai)	<code>gpm.ap-shanghai.tencentcloudapi.com</code>
North China (Beijing)	<code>gpm.ap-beijing.tencentcloudapi.com</code>
Southwest China (Chengdu)	<code>gpm.ap-chengdu.tencentcloudapi.com</code>
Southwest China (Chongqing)	<code>gpm.ap-chongqing.tencentcloudapi.com</code>
Hong Kong, Macao, Taiwan (Hong Kong, China)	<code>gpm.ap-hongkong.tencentcloudapi.com</code>

Southeast Asia (Singapore)	gpm.ap-singapore.tencentcloudapi.com
Southeast Asia (Bangkok)	gpm.ap-bangkok.tencentcloudapi.com
South Asia (Mumbai)	gpm.ap-mumbai.tencentcloudapi.com
Northeast Asia (Seoul)	gpm.ap-seoul.tencentcloudapi.com
Northeast Asia (Tokyo)	gpm.ap-tokyo.tencentcloudapi.com
U.S. East Coast (Virginia)	gpm.na-ashburn.tencentcloudapi.com
U.S. West Coast (Silicon Valley)	gpm.na-siliconvalley.tencentcloudapi.com
North America (Toronto)	gpm.na-toronto.tencentcloudapi.com
Europe (Frankfurt)	gpm.eu-frankfurt.tencentcloudapi.com
Europe (Moscow)	gpm.eu-moscow.tencentcloudapi.com

2. Communications Protocol

All the Tencent Cloud APIs communicate via HTTPS, providing highly secure communication tunnels.

3. Request Methods

Supported HTTP request methods:

- POST (recommended)
- GET

The Content-Type types supported by POST requests:

- application/json (recommended). The TC3-HMAC-SHA256 signature algorithm must be used.
- application/x-www-form-urlencoded. The HmacSHA1 or HmacSHA256 signature algorithm must be used.
- multipart/form-data (only supported by certain APIs). You must use TC3-HMAC-SHA256 to calculate the signature.

The size of a GET request packet is up to 32 KB. The size of a POST request is up to 1 MB when the HmacSHA1 or HmacSHA256 signature algorithm is used, and up to 10 MB when TC3-HMAC-SHA256 is used.

4. Character Encoding

Only UTF-8 encoding is used.

Common Params

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Common parameters are used for all APIs authenticating requestors. Common parameters must be included in all API requests, and they will not be described in individual API documents.

Signature Algorithm v3

When the TC3-HMAC-SHA256 algorithm is used, the common parameters should be uniformly placed in the HTTP request header, as shown below:

Parameter Name	Type	Required	Description
X-TC-Action	String	Yes	The name of the API for the desired operation. For the specific description of common parameter <code>Action</code> in the input parameter documentation. For example, the API for querying the CVM <code>DescribeInstances</code> .
X-TC-Region	String	Yes	Region parameter, which is used to identify the region to work with belongs. For values supported for an API, see the parameter <code>Region</code> in the input parameters in related API documentation. This parameter is not required for some APIs (which will be indicated in the documentation), and will not take effect even it is passed.
X-TC-Timestamp	Integer	Yes	The current UNIX timestamp that records the time when the request is sent. For example, 1529223702. Note: If the difference between the server time is greater than 5 minutes, a signature expires.
X-TC-Version	String	Yes	API version of the action. For the valid values, see the description of parameter <code>Version</code> in the API documentation. For example, 2017-03-12.
Authorization	String	Yes	The HTTP authentication request header, for example: TC3-HMAC-SHA256 Credential=AKIDEXAMPLE/Date/service;SignedHeaders=content-type;host, Signature=fe5f80f77d5fa3beca038a248ff027d0445342fe2 Here: - TC3-HMAC-SHA256: Signature method, currently fixed as TC3-HMAC-SHA256; - Credential: Signature credential; AKIDEXAMPLE is the Secret Key ID, and this value must match the value of X-TC-Timestamp in UTC time format; service is the name of the product/service domain name prefix. For example, a domain name cvm.tencentcloud.com.

			the CVM product and the value would be cvm; - SignedHeaders: The headers that contains the authentication type and host are the required headers; - Signature: Signature digest.
X-TC-Token	String	No	The token used for a temporary certificate. It must be used to obtain the temporary key and token by calling a CAM API, or a long-term key.

Assuming you want to query the list of Cloud Virtual Machine instances in the Guangzhou region, the request structure in the form of request URL, request header and request body may be as follows:

Example of an HTTP GET request structure:

```
https://cvm.tencentcloudapi.com/?Limit=10&offset=0
```

```
Authorization: TC3-HMAC-SHA256 Credential=AKIDz8krbsJ5yKBZQpn74WFkmLPx3EXAMPLE/2018-10-09/cvm/tc3_request, SignedHeaders=content-type;host, Signature=5da7a33f6993f0614b047e5df4582db9e9bf4672ba50567dba16c6ccf174c474
```

```
Content-Type: application/x-www-form-urlencoded
```

```
Host: cvm.tencentcloudapi.com
```

```
X-TC-Action: DescribeInstances
```

```
X-TC-Version: 2017-03-12
```

```
X-TC-Timestamp: 1539084154
```

```
X-TC-Region: ap-guangzhou
```

The following example shows you how to structure an HTTP POST (application/json) request:

```
https://cvm.tencentcloudapi.com/
```

```
Authorization: TC3-HMAC-SHA256 Credential=AKIDEXAMPLE/2018-05-30/cvm/tc3_request, SignedHeaders=content-type;host, Signature=582c400e06b5924a6f2b5d7d672d79c15b13162d9279b0855cfba6789a8edb4c
```

```
Content-Type: application/json
```

```
Host: cvm.tencentcloudapi.com
```

```
X-TC-Action: DescribeInstances
```

```
X-TC-Version: 2017-03-12
```

```
X-TC-Timestamp: 1527672334
```

```
X-TC-Region: ap-guangzhou
```

```
{"Offset":0,"Limit":10}
```

Example of an HTTP POST (multipart/form-data) request structure (only supported by specific APIs):

```
https://cvm.tencentcloudapi.com/
```

```
Authorization: TC3-HMAC-SHA256 Credential=AKIDEXAMPLE/2018-05-30/cvm/tc3_request, SignedHeaders=c
```

```
Content-Type: multipart/form-data; boundary=58731222010402
Host: cvm.tencentcloudapi.com
X-TC-Action: DescribeInstances
X-TC-Version: 2017-03-12
X-TC-Timestamp: 1527672334
X-TC-Region: ap-guangzhou

--58731222010402
Content-Disposition: form-data; name="Offset"

0
--58731222010402
Content-Disposition: form-data; name="Limit"

10
--58731222010402--
```

Signature Algorithm v1

To adopt the HmacSHA1 and HmacSHA256 signature methods, common parameters must be put into the request string, as shown below:

Parameter Name	Type	Required	Description
Action	String	Yes	The name of the API for the desired operation. For the specific value, see the description of common parameter <code>Action</code> in the input parameters in related API documentation. For example, the API for querying the CVM instance list is <code>DescribeInstances</code> .
Region	String	Yes	Region parameter, which is used to identify the region to which the data you want to work with belongs. For values supported for an API, see the description of common parameter <code>Region</code> in the input parameters in related API documentation. Note: This parameter is not required for some APIs (which will be indicated in related API documentation), and will not take effect even if it is passed.
Timestamp	Integer	Yes	The current UNIX timestamp that records the time when the API request was initiated, for example,

			1529223702. If the difference between the value and the current system time is too large, a signature expiration error may occur.
Nonce	Integer	Yes	A random positive integer used along with <code>Timestamp</code> to prevent replay attacks.
SecretId	String	Yes	The identifying SecretId obtained on the Cloud API Key page. A SecretId corresponds to a unique SecretKey which is used to generate the request signature (Signature).
Signature	String	Yes	Request signature used to verify the validity of this request. This is calculated based on the actual input parameters. For more information about how this is calculated, see the API authentication documentation.
Version	String	Yes	API version of the action. For the valid values, see the description of the common input parameter <code>Version</code> in the API documentation. For example, the version of CVM is 2017-03-12.
SignatureMethod	String	No	Signature method. Currently, only HmacSHA256 and HmacSHA1 are supported. The HmacSHA256 algorithm is used to verify the signature only when this parameter is specified as HmacSHA256. In other cases, the signature is verified with HmacSHA1.
Token	String	No	The token used for a temporary certificate. It must be used with a temporary key. You can obtain the temporary key and token by calling a CAM API. No token is required for a long-term key.

Assuming you want to query the list of Cloud Virtual Machine instances in the Guangzhou region, the request structure in the form of request URL, request header and request body may be as follows:

Example of an HTTP GET request structure:

```
https://cvm.tencentcloudapi.com/?Action=DescribeInstances&Version=2017-03-12&SignatureMethod=HmacSHA256&Timestamp=1527672334&Signature=37ac2f4fde00b0ac9bd9eadeb459b1bbee224158d66e7ae5fcadb70b2d181d02&Region=ap-guangzhou&Nonce=23823223&SecretId=AKIDEXAMPLE
```

```
Host: cvm.tencentcloudapi.com
```

```
Content-Type: application/x-www-form-urlencoded
```

Example of an HTTP POST request structure:

```
https://cvm.tencentcloudapi.com/
```

```
Host: cvm.tencentcloudapi.com
```

```
Content-Type: application/x-www-form-urlencoded
```

```
Action=DescribeInstances&Version=2017-03-12&SignatureMethod=HmacSHA256&Timestamp=1527672334&Signature=37ac2f4fde00b0ac9bd9eadeb459b1bbee224158d66e7ae5fcadb70b2d181d02&Region=ap-guangzhou&Nonce=23823223&SecretId=AKIDEXAMPLE
```

Region List

The supported Region field values for all APIs in this product are listed as below. For any API that does not support any of the following regions, this field will be described additionally in the relevant API document.

Region	Value
South China (Guangzhou)	ap-guangzhou
Hong Kong/Macao/Taiwan (Hong Kong, China)	ap-hongkong
East China (Shanghai)	ap-shanghai
Europe (Frankfurt)	eu-frankfurt

Signature v3

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TencentCloud API authenticates every single request, i.e., the request must be signed using the security credentials in the designated steps. Each request has to contain the signature information (Signature) in the common request parameters and be sent in the specified way and format.

Applying for Security Credentials

The security credential used in this document is a key, which includes a SecretId and a SecretKey. Each user can have up to two pairs of keys.

- SecretId: Used to identify the API caller, which is just like a username.
- SecretKey: Used to authenticate the API caller, which is just like a password.
- **You must keep your security credentials private and avoid disclosure; otherwise, your assets may be compromised. If they are disclosed, please disable them as soon as possible.**

You can apply for the security credentials through the following steps:

1. Log in to the [Tencent Cloud Console](#).
2. Go to the [TencentCloud API Key](#) console page.
3. On the [TencentCloud API Key](#) page, click **Create** to create a SecretId/SecretKey pair.

Using the Resources for Developers

TencentCloud API comes with SDKs for seven commonly used programming languages, including [Python](#), [Java](#), [PHP](#), [Go](#), [NodeJS](#) and [.NET](#). In addition, it provides [API Explorer](#) which enables online call, signature verification, and SDK code generation. If you have any troubles calculating a signature, consult these resources.

TC3-HMAC-SHA256 Signature Algorithm

Compatible with the previous HmacSHA1 and HmacSHA256 signature algorithms, the TC3-HMAC-SHA256 signature algorithm is more secure and supports larger requests and JSON format with better performance. We recommend using TC3-HMAC-SHA256 to calculate the signature.

TencentCloud API supports both GET and POST requests. For the GET method, only the Content-Type: application/x-www-form-urlencoded protocol format is supported. For the POST method, two protocol formats, Content-Type: application/json and Content-Type: multipart/form-data, are supported. The JSON format is supported by default for all business APIs, and the multipart format is supported only for specific business APIs. In this case, the API cannot be called in JSON format. See the specific business API documentation for more information. The POST method is recommended, as there is no difference in the results of both the methods, but the GET method only supports request packets up to 32 KB.

The following uses querying the list of CVM instances in the Guangzhou region as an example to describe the steps of signature splicing. We chose this API because:

1. CVM is activated by default, and this API is often used;
2. It is read-only and does not change the status of existing resources;
3. It covers many types of parameters, which allows it to be used to demonstrate how to use arrays containing data structures.

In the example, we try to choose common parameters and API parameters that are prone to mistakes. When you actually call an API, please use parameters based on the actual conditions. The parameters vary by API. Do not copy the parameters and values in this example.

Assuming that your SecretId and SecretKey are `AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****` and `Gu5t9xGARNpq86cd98joQYCN3*****`, respectively, if you want to view the status of the instance in the Guangzhou region whose CVM instance name is "unnamed" and have only one data entry returned, then the request may be:

```
curl -X POST https://cvm.tencentcloudapi.com ¥
-H "Authorization: TC3-HMAC-SHA256 Credential=AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****/2019-02-25/cvm/tc3_request, SignedHeaders=content-type;host, Signature=c492e8e41437e97a620b728c301bb8d17e7dc0c17eeabce80c20cd70fc3a78ff" ¥
-H "Content-Type: application/json; charset=utf-8" ¥
-H "Host: cvm.tencentcloudapi.com" ¥
-H "X-TC-Action: DescribeInstances" ¥
-H "X-TC-Timestamp: 1551113065" ¥
-H "X-TC-Version: 2017-03-12" ¥
-H "X-TC-Region: ap-guangzhou" ¥
-d '{"Limit": 1, "Filters": [{"Values": ["unnamed"], "Name": "instance-name"}]}'
```

The signature calculation process is explained in detail below.

1. Concatenating the CanonicalRequest String

Concatenate the canonical request string (CanonicalRequest) in the following pseudocode format:

```
CanonicalRequest =
HTTPRequestMethod + '¥n' +
CanonicalURI + '¥n' +
CanonicalQueryString + '¥n' +
CanonicalHeaders + '¥n' +
SignedHeaders + '¥n' +
HashedRequestPayload
```

Field Name	Explanation
HTTPRequestMethod	HTTP request method (GET or POST). This example uses <code>POST</code> .
CanonicalURI	URI parameter. Slash ("/") is used for API 3.0.
CanonicalQueryString	The query string in the URL of the originating HTTP request. This is always an empty string "" for POST requests, and is the string after the question mark (?) for GET requests. For example: Limit=10&Offset=0. Note: <code>CanonicalQueryString</code> must be URL-encoded, referencing RFC3986, the UTF8 character set. We recommend using the programming language library. All special characters must be encoded and capitalized.
CanonicalHeaders	Header information for signature calculation, including at least two headers of <code>host</code> and <code>content-type</code> . Custom headers can be added to participate in the signature process to improve the uniqueness and security of the request. Concatenation rules: - Both the key and value of the header should be converted to lowercase with the leading and trailing spaces removed, so they are concatenated in the format of key:value¥n format; - If there are multiple headers, they should be sorted in ASCII ascending order by the header keys (lowercase). The calculation result in this example is <code>content-type:application/json; charset=utf-8¥nhost:cvm.tencentcloudapi.com¥n</code> . Note: <code>content-type</code> must match the actually sent content. In some programming languages, a charset value would be added even if it is not specified. In this case, the request sent is different from the one signed, and the sever will return an error indicating that signature verification failed.
SignedHeaders	Header information for signature calculation, indicating which headers of the request participate in the signature process (they must each individually correspond to the headers in

	CanonicalHeaders). <code>Content-type</code> and <code>host</code> are required headers. Concatenation rules: - Both the key and value of the header should be converted to lowercase; - If there are multiple headers, they should be sorted in ASCII ascending order by the header keys (lowercase) and separated by semicolons (;). The value in this example is <code>content-type;host</code>
HashedRequestPayload	Hash value of the request payload (i.e., the body, such as <code>{"Limit": 1, "Filters": [{"Values": ["unnamed"], "Name": "instance-name"}]}</code> in this example). The pseudocode for calculation is <code>Lowercase(HexEncode(Hash.SHA256(RequestPayload)))</code> by SHA256 hashing the payload of the HTTP request, performing hexadecimal encoding, and finally converting the encoded string to lowercase letters. For GET requests, <code>RequestPayload</code> is always an empty string. The calculation result in this example is <code>99d58dfbc6745f6747f36bfca17dee5e6881dc0428a0a36f96199342bc5b4907</code>.

According to the rules above, the `CanonicalRequest` string obtained in the example is as follows:

POST

/

content-type:application/json; charset=utf-8

host:cvm.tencentcloudapi.com

content-type;host

99d58dfbc6745f6747f36bfca17dee5e6881dc0428a0a36f96199342bc5b4907

2. Concatenating the String to Be Signed

The string to sign is concatenated as follows:

```
StringToSign =
Algorithm + \n +
RequestTimestamp + \n +
CredentialScope + \n +
HashedCanonicalRequest
```

Field Name	Explanation
Algorithm	Signature algorithm, which is currently always <code>TC3-HMAC-SHA256</code> .

RequestTimestamp	Request timestamp, i.e., the value of the common parameter <code>X-TC-Timestamp</code> in the request header, which is the UNIX timestamp of the current time in seconds, such as <code>1551113065</code> in this example.
CredentialScope	Scope of the credential in the format of <code>Date/service/tc3_request</code> , including the date, requested service and termination string (<code>tc3_request</code>). Date is a date in UTC time, whose value should match the UTC date converted by the common parameter <code>X-TC-Timestamp</code> ; <code>service</code> is the product name, which should match the domain name of the product called. The calculation result in this example is <code>2019-02-25/cvm/tc3_request</code> .
HashedCanonicalRequest	Hash value of the CanonicalRequest string concatenated in the steps above. The pseudocode for calculation is <code>Lowercase(HexEncode(Hash.SHA256(CanonicalRequest)))</code> . The calculation result in this example is <code>2815843035062ffda5fd6f2a44ea8a34818b0dc46f024b8b3786976a3adda7a</code> .

Note:

1. Date has to be calculated from the timestamp "X-TC-Timestamp" and the time zone is UTC+0. If you add the system's local time zone information (such as UTC+8), calls can succeed both day and night but will definitely fail at 00:00. For example, if the timestamp is 1551113065 and the time in UTC+8 is 2019-02-26 00:44:25, the UTC+0 date in the calculated Date value should be 2019-02-25 instead of 2019-02-26.
2. Timestamp must be the same as your current system time, and your system time and standard time must be synced; if the difference between Timestamp and your current system time is larger than five minutes, the request will fail. If your system time is out of sync with the standard time for a while, the request will fail and return a signature expiration error.

According to the preceding rules, the string to be signed obtained in the example is as follows:

```
TC3-HMAC-SHA256
1551113065
2019-02-25/cvm/tc3_request
2815843035062ffda5fd6f2a44ea8a34818b0dc46f024b8b3786976a3adda7a
```

3. Calculating the Signature

1. Calculate the derived signature key with the following pseudocode:

```
SecretKey = "Gu5t9xGARNpq86cd98joQYCN3*****"  
SecretDate = HMAC_SHA256("TC3" + SecretKey, Date)  
SecretService = HMAC_SHA256(SecretDate, Service)  
SecretSigning = HMAC_SHA256(SecretService, "tc3_request")
```

Field Name	Explanation
SecretKey	The original SecretKey, i.e., <code>Gu5t9xGARNpq86cd98joQYCN3*****</code> .
Date	The Date field information in <code>Credential</code> , such as <code>2019-02-25</code> in this example.
Service	Value in the Service field in <code>Credential</code> , such as <code>cvm</code> in this example.

2. Calculate the signature with the following pseudocode:

```
Signature = HexEncode(HMAC_SHA256(SecretSigning, StringToSign))
```

4. Concatenating the Authorization

The Authorization is concatenated as follows:

```
Authorization =  
Algorithm + ' ' +  
'Credential=' + SecretId + '/' + CredentialScope + ', ' +  
'SignedHeaders=' + SignedHeaders + ', ' +  
'Signature=' + Signature
```

Field Name	Explanation
Algorithm	Signature algorithm, which is always <code>TC3-HMAC-SHA256</code> .
SecretId	The SecretId in the key pair, i.e., <code>AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****</code> .
CredentialScope	Credential scope (see above). The calculation result in this example is <code>2019-02-25/cvm/tc3_request</code> .
SignedHeaders	Header information for signature calculation (see above), such as <code>content-type;host</code> in this example.
Signature	Signature value. The calculation result in this example is

```
c492e8e41437e97a620b728c301bb8d17e7dc0c17eeabce80c20cd70fc3a78ff .
```

According to the rules above, the value obtained in the example is:

```
TC3-HMAC-SHA256 Credential=AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****/2019-02-25/cvm/tc3_request, SignedHeaders=content-type;host, Signature=c492e8e41437e97a620b728c301bb8d17e7dc0c17eeabce80c20cd70fc3a78ff
```

The following example shows a finished authorization header:

```
POST https://cvm.tencentcloudapi.com/
Authorization: TC3-HMAC-SHA256 Credential=AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****/2019-02-25/cvm/tc3_request, SignedHeaders=content-type;host, Signature=c492e8e41437e97a620b728c301bb8d17e7dc0c17eeabce80c20cd70fc3a78ff
Content-Type: application/json; charset=utf-8
Host: cvm.tencentcloudapi.com
X-TC-Action: DescribeInstances
X-TC-Version: 2017-03-12
X-TC-Timestamp: 1551113065
X-TC-Region: ap-guangzhou

{"Limit": 1, "Filters": [{"Values": ["unnamed"], "Name": "instance-name"}]}
```

5. Signature Demo

When calling API 3.0, you are recommended to use the corresponding Tencent Cloud SDK 3.0 which encapsulates the signature process, enabling you to focus on only the specific APIs provided by the product when developing. See [SDK Center](#) for more information. Currently, the following programming languages are supported:

- [Python](#)
- [Java](#)
- [PHP](#)
- [Go](#)
- [NodeJS](#)
- [.NET](#)

To further explain the signing process, we will use a programming language to implement the process described above. The request domain name, API and parameter values in the sample are used here. This goal of this example is only to provide additional clarification for the signature process, please see the SDK for actual usage.

The final output URL might be: `https://cvm.tencentcloudapi.com/?`

`Action=DescribeInstances&InstanceId=ins-`

`09dx96dg&Limit=20&Nonce=11886&Offset=0&Region=ap-`

`guangzhou&SecretId=AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****&Signature=ElIP9YW3pW28FpsEdkXt%2F%2BWcGel%3D&Timestamp=1465185768&Version=2017-03-12.`

Note: The key in the example is fictitious, and the timestamp is not the current time of the system, so if this URL is opened in the browser or called using commands such as curl, an authentication error will be returned: Signature expired. In order to get a URL that can work properly, you need to replace the SecretId and SecretKey in the example with your real credentials and use the current time of the system as the Timestamp.

Note: In the example below, even if you use the same programming language, the order of the parameters in the URL may be different for each execution. However, the order does not matter, as long as all the parameters are included in the URL and the signature is calculated correctly.

Note: The following code is only applicable to API 3.0. It cannot be directly used in other signature processes. Even with an older API, signature calculation errors may occur due to the differences in details. Please refer to the corresponding documentation.

Java

```
import java.nio.charset.Charset;
import java.nio.charset.StandardCharsets;
import java.security.MessageDigest;
import java.text.SimpleDateFormat;
import java.util.Date;
import java.util.TimeZone;
import java.util.TreeMap;
import javax.crypto.Mac;
import javax.crypto.spec.SecretKeySpec;
import javax.xml.bind.DatatypeConverter;

public class TencentCloudAPITC3Demo {
    private final static Charset UTF8 = StandardCharsets.UTF_8;
    private final static String SECRET_ID = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****";
    private final static String SECRET_KEY = "Gu5t9xGARNpq86cd98joQYCN3*****";
    private final static String CT_JSON = "application/json; charset=utf-8";

    public static byte[] hmac256(byte[] key, String msg) throws Exception {
        Mac mac = Mac.getInstance("HmacSHA256");
        SecretKeySpec secretKeySpec = new SecretKeySpec(key, mac.getAlgorithm());
        mac.init(secretKeySpec);
        return mac.doFinal(msg.getBytes(UTF8));
    }
}
```

```

public static String sha256Hex(String s) throws Exception {
    MessageDigest md = MessageDigest.getInstance("SHA-256");
    byte[] d = md.digest(s.getBytes(UTF8));
    return DatatypeConverter.printHexBinary(d).toLowerCase();
}

public static void main(String[] args) throws Exception {
    String service = "cvm";
    String host = "cvm.tencentcloudapi.com";
    String region = "ap-guangzhou";
    String action = "DescribeInstances";
    String version = "2017-03-12";
    String algorithm = "TC3-HMAC-SHA256";
    String timestamp = "1551113065";
    //String timestamp = String.valueOf(System.currentTimeMillis() / 1000);
    SimpleDateFormat sdf = new SimpleDateFormat("yyyy-MM-dd");
    // Pay attention to the time zone; otherwise, errors may occur
    sdf.setTimeZone(TimeZone.getTimeZone("UTC"));
    String date = sdf.format(new Date(Long.valueOf(timestamp + "000")));

    // ***** Step 1: Concatenate the CanonicalRequest string *****
    String httpRequestMethod = "POST";
    String canonicalUri = "/";
    String canonicalQueryString = "";
    String canonicalHeaders = "content-type:application/json; charset=utf-8\n" + "host:" + host +
    "\n";
    String signedHeaders = "content-type;host";

    String payload = "{\"Limit\": 1, \"Filters\": [{\"Values\": [\"unnamed\"], \"Name\": \"instance-name\"}] }";
    String hashedRequestPayload = sha256Hex(payload);
    String canonicalRequest = httpRequestMethod + "\n" + canonicalUri + "\n" + canonicalQueryString +
    "\n"
    + canonicalHeaders + "\n" + signedHeaders + "\n" + hashedRequestPayload;
    System.out.println(canonicalRequest);

    // ***** Step 2: Concatenate the string to sign *****
    String credentialScope = date + "/" + service + "/" + "tc3_request";
    String hashedCanonicalRequest = sha256Hex(canonicalRequest);
    String stringToSign = algorithm + "\n" + timestamp + "\n" + credentialScope + "\n" + hashedCanonicalRequest;
    System.out.println(stringToSign);

    // ***** Step 3: Calculate the signature *****
    byte[] secretDate = hmac256(("TC3" + SECRET_KEY).getBytes(UTF8), date);
    byte[] secretService = hmac256(secretDate, service);
    byte[] secretSigning = hmac256(secretService, "tc3_request");

```

```

String signature = DatatypeConverter.printHexBinary(hmac256(secretSigning, stringToSign)).toLowerCase();
System.out.println(signature);

// ***** Step 4: Concatenate the Authorization *****
String authorization = algorithm + " " + "Credential=" + SECRET_ID + "/" + credentialScope + ", "
+ "SignedHeaders=" + signedHeaders + ", " + "Signature=" + signature;
System.out.println(authorization);

TreeMap<String, String> headers = new TreeMap<String, String>();
headers.put("Authorization", authorization);
headers.put("Content-Type", CT_JSON);
headers.put("Host", host);
headers.put("X-TC-Action", action);
headers.put("X-TC-Timestamp", timestamp);
headers.put("X-TC-Version", version);
headers.put("X-TC-Region", region);

StringBuilder sb = new StringBuilder();
sb.append("curl -X POST https://").append(host)
.append(" -H 'Authorization: ").append(authorization).append("'")
.append(" -H 'Content-Type: application/json; charset=utf-8'")
.append(" -H 'Host: ').append(host).append("'")
.append(" -H 'X-TC-Action: ').append(action).append("'")
.append(" -H 'X-TC-Timestamp: ').append(timestamp).append("'")
.append(" -H 'X-TC-Version: ').append(version).append("'")
.append(" -H 'X-TC-Region: ').append(region).append("'")
.append(" -d '").append(payload).append("'");
System.out.println(sb.toString());
}
}

```

Python

```

# -*- coding: utf-8 -*-
import hashlib, hmac, json, os, sys, time
from datetime import datetime

# Key Parameters
secret_id = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****"
secret_key = "Gu5t9xGARNpq86cd98joQYCN3*****"

service = "cvm"
host = "cvm.tencentcloudapi.com"
endpoint = "https://" + host
region = "ap-guangzhou"
action = "DescribeInstances"

```

```

version = "2017-03-12"
algorithm = "TC3-HMAC-SHA256"
#timestamp = int(time.time())
timestamp = 1551113065
date = datetime.utcfromtimestamp(timestamp).strftime("%Y-%m-%d")
params = {"Limit": 1, "Filters": [{"Name": "instance-name", "Values": ["unnamed"]}]}

# ***** Step 1: Concatenate the CanonicalRequest string *****
http_request_method = "POST"
canonical_uri = "/"
canonical_querystring = ""
ct = "application/json; charset=utf-8"
payload = json.dumps(params)
canonical_headers = "content-type:%s\nhost:%s\n" % (ct, host)
signed_headers = "content-type;host"
hashed_request_payload = hashlib.sha256(payload.encode("utf-8")).hexdigest()
canonical_request = (http_request_method + "\n" +
canonical_uri + "\n" +
canonical_querystring + "\n" +
canonical_headers + "\n" +
signed_headers + "\n" +
hashed_request_payload)
print(canonical_request)

# ***** Step 2: Concatenate the string to sign *****
credential_scope = date + "/" + service + "/" + "tc3_request"
hashed_canonical_request = hashlib.sha256(canonical_request.encode("utf-8")).hexdigest()
string_to_sign = (algorithm + "\n" +
str(timestamp) + "\n" +
credential_scope + "\n" +
hashed_canonical_request)
print(string_to_sign)

# ***** Step 3: Calculate the Signature *****
# Function for computing signature digest
def sign(key, msg):
    return hmac.new(key, msg.encode("utf-8"), hashlib.sha256).digest()
secret_date = sign(("TC3" + secret_key).encode("utf-8"), date)
secret_service = sign(secret_date, service)
secret_signing = sign(secret_service, "tc3_request")
signature = hmac.new(secret_signing, string_to_sign.encode("utf-8"), hashlib.sha256).hexdigest()
print(signature)

# ***** Step 4: Concatenate the Authorization *****
authorization = (algorithm + " " +
"Credential=" + secret_id + "/" + credential_scope + ", " +
"SignedHeaders=" + signed_headers + ", " +

```

```

"Signature=" + signature)
print(authorization)

print('curl -X POST ' + endpoint
+ ' -H "Authorization: ' + authorization + '"
+ ' -H "Content-Type: application/json; charset=utf-8"'
+ ' -H "Host: ' + host + '"
+ ' -H "X-TC-Action: ' + action + '"
+ ' -H "X-TC-Timestamp: ' + str(timestamp) + '"
+ ' -H "X-TC-Version: ' + version + '"
+ ' -H "X-TC-Region: ' + region + '"
+ " -d '" + payload + '"')

```

Golang

```

package main

import (
    "crypto/hmac"
    "crypto/sha256"
    "encoding/hex"
    "fmt"
    "time"
)

func sha256hex(s string) string {
    b := sha256.Sum256([]byte(s))
    return hex.EncodeToString(b[:])
}

func hmacsha256(s, key string) string {
    hashed := hmac.New(sha256.New, []byte(key))
    hashed.Write([]byte(s))
    return string(hashed.Sum(nil))
}

func main() {
    secretId := "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****"
    secretKey := "Gu5t9xGARNpq86cd98joQYCN3*****"
    host := "cvm.tencentcloudapi.com"
    algorithm := "TC3-HMAC-SHA256"
    service := "cvm"
    version := "2017-03-12"
    action := "DescribeInstances"
    region := "ap-guangzhou"
    //var timestamp int64 = time.Now().Unix()
    var timestamp int64 = 1551113065
}

```

```

// step 1: build canonical request string
httpRequestMethod := "POST"
canonicalURI := "/"
canonicalQueryString := ""
canonicalHeaders := "content-type:application/json; charset=utf-8\r\n" + "host:" + host + "\r\n"
signedHeaders := "content-type;host"
payload := `{"Limit": 1, "Filters": [{"Values": ["unnamed"], "Name": "instance-name"}]}`
hashedRequestPayload := sha256hex(payload)
canonicalRequest := fmt.Sprintf("%s\r\n%s\r\n%s\r\n%s\r\n%s\r\n%s",
httpRequestMethod,
canonicalURI,
canonicalQueryString,
canonicalHeaders,
signedHeaders,
hashedRequestPayload)
fmt.Println(canonicalRequest)

// step 2: build string to sign
date := time.Unix(timestamp, 0).UTC().Format("2006-01-02")
credentialScope := fmt.Sprintf("%s/%s/tc3_request", date, service)
hashedCanonicalRequest := sha256hex(canonicalRequest)
string2sign := fmt.Sprintf("%s\r\n%d\r\n%s\r\n%s",
algorithm,
timestamp,
credentialScope,
hashedCanonicalRequest)
fmt.Println(string2sign)

// step 3: sign string
secretDate := hmacsha256(date, "TC3"+secretKey)
secretService := hmacsha256(service, secretDate)
secretSigning := hmacsha256("tc3_request", secretService)
signature := hex.EncodeToString([]byte(hmacsha256(string2sign, secretSigning)))
fmt.Println(signature)

// step 4: build authorization
authorization := fmt.Sprintf("%s Credential=%s/%s, SignedHeaders=%s, Signature=%s",
algorithm,
secretId,
credentialScope,
signedHeaders,
signature)
fmt.Println(authorization)

curl := fmt.Sprintf(`curl -X POST https://%s\r\n
-H "Authorization: %s"\r\n
-H "Content-Type: application/json; charset=utf-8"\r\n

```

```

-H "Host: %s" -H "X-TC-Action: %s"¥
-H "X-TC-Timestamp: %d"¥
-H "X-TC-Version: %s"¥
-H "X-TC-Region: %s"¥
-d '%s'`, host, authorization, host, action, timestamp, version, region, payload)
fmt.Println(curl)
}

```

PHP

```

<?php
$secretId = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****";
$secretKey = "Gu5t9xGARNpq86cd98joQYCN3*****";
$host = "cvm.tencentcloudapi.com";
$service = "cvm";
$version = "2017-03-12";
$action = "DescribeInstances";
$region = "ap-guangzhou";
// $timestamp = time();
$timestamp = 1551113065;
$algorithm = "TC3-HMAC-SHA256";

// step 1: build canonical request string
$httpRequestMethod = "POST";
$canonicalUri = "/";
$canonicalQueryString = "";
$canonicalHeaders = "content-type:application/json; charset=utf-8¥n".host: ".$host."¥n";
$signedHeaders = "content-type;host";
$payload = '{"Limit": 1, "Filters": [{"Values": ["unnamed"], "Name": "instance-name"}]}';
$hashedRequestPayload = hash("SHA256", $payload);
$canonicalRequest = $httpRequestMethod."¥n"
.$canonicalUri."¥n"
.$canonicalQueryString."¥n"
.$canonicalHeaders."¥n"
.$signedHeaders."¥n"
.$hashedRequestPayload;
echo $canonicalRequest.PHP_EOL;

// step 2: build string to sign
$date = gmdate("Y-m-d", $timestamp);
$credentialScope = $date."/".$service."/tc3_request";
$hashedCanonicalRequest = hash("SHA256", $canonicalRequest);
$stringToSign = $algorithm."¥n"
.$timestamp."¥n"
.$credentialScope."¥n"
.$hashedCanonicalRequest;
echo $stringToSign.PHP_EOL;

```

```
// step 3: sign string
$secretDate = hash_hmac("SHA256", $date, "TC3".$secretKey, true);
$secretService = hash_hmac("SHA256", $service, $secretDate, true);
$secretSigning = hash_hmac("SHA256", "tc3_request", $secretService, true);
$signature = hash_hmac("SHA256", $stringToSign, $secretSigning);
echo $signature.PHP_EOL;

// step 4: build authorization
$authorization = $algorithm
." Credential=".$secretId."/".$credentialScope
.", SignedHeaders=content-type;host, Signature=".$signature;
echo $authorization.PHP_EOL;

$curl = "curl -X POST https://" . $host
." -H \"Authorization: '." . $authorization . "'"
." -H \"Content-Type: application/json; charset=utf-8\"
." -H \"Host: '." . $host . "'"
." -H \"X-TC-Action: '." . $action . "'"
." -H \"X-TC-Timestamp: '." . $timestamp . "'"
." -H \"X-TC-Version: '." . $version . "'"
." -H \"X-TC-Region: '." . $region . "'"
." -d '." . $payload . "'" ;
echo $curl.PHP_EOL;
```

Ruby

```
# -*- coding: UTF-8 -*-
# require ruby>=2.3.0
require 'digest'
require 'json'
require 'time'
require 'openssl'

# Key Parameters
secret_id = 'AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****'
secret_key = 'Gu5t9xGARNpq86cd98joQYCN3*****'

service = 'cvm'
host = 'cvm.tencentcloudapi.com'
endpoint = 'https://' + host
region = 'ap-guangzhou'
action = 'DescribeInstances'
version = '2017-03-12'
algorithm = 'TC3-HMAC-SHA256'
# timestamp = Time.now.to_i
timestamp = 1551113065
```

```

date = Time.at(timestamp).utc.strftime('%Y-%m-%d')

# ***** Step 1: Concatenate the CanonicalRequest string *****
http_request_method = 'POST'
canonical_uri = '/'
canonical_querystring = ''
canonical_headers = "content-type:application/json; charset=utf-8\nhost:#{host}\n"
signed_headers = 'content-type;host'
# params = { 'Limit' => 1, 'Filters' => [{ 'Name' => 'instance-name', 'Values' => ['unnamed'] }] }
}
# payload = JSON.generate(params, { 'ascii_only' => true, 'space' => ' ' })
# json will generate in random order, to get specified result in example, we hard-code it here.
payload = '{"Limit": 1, "Filters": [{"Values": ["unnamed"], "Name": "instance-name"}]}'
hashed_request_payload = Digest::SHA256.hexdigest(payload)
canonical_request = [
  http_request_method,
  canonical_uri,
  canonical_querystring,
  canonical_headers,
  signed_headers,
  hashed_request_payload,
].join("\n")

puts canonical_request

# ***** Step 2: Concatenate the string to sign *****
credential_scope = date + '/' + service + '/' + 'tc3_request'
hashed_request_payload = Digest::SHA256.hexdigest(canonical_request)
string_to_sign = [
  algorithm,
  timestamp.to_s,
  credential_scope,
  hashed_request_payload,
].join("\n")
puts string_to_sign

# ***** Step 3: Calculate the Signature *****
digest = OpenSSL::Digest.new('sha256')
secret_date = OpenSSL::HMAC.digest(digest, 'TC3' + secret_key, date)
secret_service = OpenSSL::HMAC.digest(digest, secret_date, service)
secret_signing = OpenSSL::HMAC.digest(digest, secret_service, 'tc3_request')
signature = OpenSSL::HMAC.hexdigest(digest, secret_signing, string_to_sign)
puts signature

# ***** Step 4: Concatenate the Authorization *****
authorization = "#{algorithm} Credential=#{secret_id}/#{credential_scope}, SignedHeaders=#{signed_headers}, Signature=#{signature}"
puts authorization

```

```
puts 'curl -X POST ' + endpoint ¥
+ ' -H "Authorization: ' + authorization + '"" ¥
+ ' -H "Content-Type: application/json; charset=utf-8"" ¥
+ ' -H "Host: ' + host + '"" ¥
+ ' -H "X-TC-Action: ' + action + '"" ¥
+ ' -H "X-TC-Timestamp: ' + timestamp.to_s + '"" ¥
+ ' -H "X-TC-Version: ' + version + '"" ¥
+ ' -H "X-TC-Region: ' + region + '"" ¥
+ " -d '" + payload + '""
```

DotNet

```
using System;
using System.Collections.Generic;
using System.Security.Cryptography;
using System.Text;

public class Application
{
    public static string SHA256Hex(string s)
    {
        using (SHA256 algo = SHA256.Create())
        {
            byte[] hashbytes = algo.ComputeHash(Encoding.UTF8.GetBytes(s));
            StringBuilder builder = new StringBuilder();
            for (int i = 0; i < hashbytes.Length; ++i)
            {
                builder.Append(hashbytes[i].ToString("x2"));
            }
            return builder.ToString();
        }
    }

    public static byte[] HmacSHA256(byte[] key, byte[] msg)
    {
        using (HMACSHA256 mac = new HMACSHA256(key))
        {
            return mac.ComputeHash(msg);
        }
    }

    public static Dictionary<String, String> BuildHeaders(string secretid,
        string secretkey, string service, string endpoint, string region,
        string action, string version, DateTime date, string requestPayload)
    {
        string datestr = date.ToString("yyyy-MM-dd");
        DateTime startTime = new DateTime(1970, 1, 1, 0, 0, 0, DateTimeKind.Utc);
```

```

long requestTimestamp = (long)Math.Round((date - startTime).TotalMilliseconds, MidpointRounding.AwayFromZero) / 1000;
// ***** Step 1: Concatenate the CanonicalRequest string *****
string algorithm = "TC3-HMAC-SHA256";
string httpRequestMethod = "POST";
string canonicalUri = "/";
string canonicalQueryString = "";
string contentType = "application/json";
string canonicalHeaders = "content-type:" + contentType + "; charset=utf-8\r\n" + "host:" + endpoint + "\r\n";
string signedHeaders = "content-type;host";
string hashedRequestPayload = SHA256Hex(requestPayload);
string canonicalRequest = httpRequestMethod + "\r\n"
+ canonicalUri + "\r\n"
+ canonicalQueryString + "\r\n"
+ canonicalHeaders + "\r\n"
+ signedHeaders + "\r\n"
+ hashedRequestPayload;
Console.WriteLine(canonicalRequest);
Console.WriteLine("-----");

// ***** Step 2: Concatenate the string to sign *****
string credentialScope = datestr + "/" + service + "/" + "tc3_request";
string hashedCanonicalRequest = SHA256Hex(canonicalRequest);
string stringToSign = algorithm + "\r\n" + requestTimestamp.ToString() + "\r\n" + credentialScope + "\r\n" + hashedCanonicalRequest;
Console.WriteLine(stringToSign);
Console.WriteLine("-----");

// ***** Step 3: Calculate the signature *****
byte[] tc3SecretKey = Encoding.UTF8.GetBytes("TC3" + secretkey);
byte[] secretDate = HmacSHA256(tc3SecretKey, Encoding.UTF8.GetBytes(datestr));
byte[] secretService = HmacSHA256(secretDate, Encoding.UTF8.GetBytes(service));
byte[] secretSigning = HmacSHA256(secretService, Encoding.UTF8.GetBytes("tc3_request"));
byte[] signatureBytes = HmacSHA256(secretSigning, Encoding.UTF8.GetBytes(stringToSign));
string signature = BitConverter.ToString(signatureBytes).Replace("-", "").ToLower();
Console.WriteLine(signature);
Console.WriteLine("-----");

// ***** Step 4: Concatenate the Authorization *****
string authorization = algorithm + " "
+ "Credential=" + secretid + "/" + credentialScope + ", "
+ "SignedHeaders=" + signedHeaders + ", "
+ "Signature=" + signature;
Console.WriteLine(authorization);
Console.WriteLine("-----");

Dictionary<string, string> headers = new Dictionary<string, string>();

```

```

headers.Add("Authorization", authorization);
headers.Add("Host", endpoint);
headers.Add("Content-Type", contentType + "; charset=utf-8");
headers.Add("X-TC-Timestamp", requestTimestamp.ToString());
headers.Add("X-TC-Version", version);
headers.Add("X-TC-Action", action);
headers.Add("X-TC-Region", region);
return headers;
}

public static void Main(string[] args)
{
    // SecretID and SecretKey
    string SECRET_ID = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****";
    string SECRET_KEY = "Gu5t9xGARNpq86cd98joQYCN3*****";

    string service = "cvm";
    string endpoint = "cvm.tencentcloudapi.com";
    string region = "ap-guangzhou";
    string action = "DescribeInstances";
    string version = "2017-03-12";

    // The timestamp `2019-02-26 00:44:25` used here is only for reference. In a project, use the fol
    // lowing parameter:
    // DateTime date = DateTime.UtcNow;
    // Enter the correct time zone. We recommend using UTC timestamp to avoid errors.
    DateTime date = new DateTime(1970, 1, 1, 0, 0, 0, 0, DateTimeKind.Utc).AddSeconds(1551113065);
    string requestPayload = "{\"Limit\": 1, \"Filters\": [{\"Values\": [\"u672a\"u547d\"u540d\"], \"Name\": \"instance-name\"}] }";

    Dictionary<string, string> headers = BuildHeaders(SECRET_ID, SECRET_KEY, service
    , endpoint, region, action, version, date, requestPayload);

    Console.WriteLine("POST https://cvm.tencentcloudapi.com");
    foreach (KeyValuePair<string, string> kv in headers)
    {
        Console.WriteLine(kv.Key + ": " + kv.Value);
    }
    Console.WriteLine();
    Console.WriteLine(requestPayload);
}
}

```

NodeJS

```

const crypto = require('crypto');

function sha256(message, secret = '', encoding) {

```

```

const hmac = crypto.createHmac('sha256', secret)
return hmac.update(message).digest(encoding)
}
function getHash(message, encoding = 'hex') {
const hash = crypto.createHash('sha256')
return hash.update(message).digest(encoding)
}
function getDate(timestamp) {
const date = new Date(timestamp * 1000)
const year = date.getUTCFullYear()
const month = ('0' + (date.getUTCMonth() + 1)).slice(-2)
const day = ('0' + date.getUTCDate()).slice(-2)
return `${year}-${month}-${day}`
}
function main(){

const SECRET_ID = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****"
const SECRET_KEY = "Gu5t9xGARNpq86cd98joQYCN3*****"

const endpoint = "cvm.tencentcloudapi.com"
const service = "cvm"
const region = "ap-guangzhou"
const action = "DescribeInstances"
const version = "2017-03-12"
//const timestamp = getTime()
const timestamp = 1551113065
const date = getDate(timestamp)

// ***** Step 1: Concatenate the CanonicalRequest string *****
const signedHeaders = "content-type;host"

const payload = "{\"Limit\": 1, \"Filters\": [{\"Values\": [\"unnamed\"], \"Name\": \"instance-name\"}]}"

const hashedRequestPayload = getHash(payload);
const httpRequestMethod = "POST"
const canonicalUri = "/"
const canonicalQueryString = ""
const canonicalHeaders = "content-type:application/json; charset=utf-8\n" + "host:" + endpoint +
"\n"

const canonicalRequest = httpRequestMethod + "\n"
+ canonicalUri + "\n"
+ canonicalQueryString + "\n"
+ canonicalHeaders + "\n"
+ signedHeaders + "\n"
+ hashedRequestPayload
console.log(canonicalRequest)

```

```

console.log("-----")

// ***** Step 2: Concatenate the string to sign *****
const algorithm = "TC3-HMAC-SHA256"
const hashedCanonicalRequest = getHash(canonicalRequest);
const credentialScope = date + "/" + service + "/" + "tc3_request"
const stringToSign = algorithm + "\n" +
timestamp + "\n" +
credentialScope + "\n" +
hashedCanonicalRequest
console.log(stringToSign)
console.log("-----")

// ***** Step 3: Calculate the signature *****
const kDate = sha256(date, 'TC3' + SECRET_KEY)
const kService = sha256(service, kDate)
const kSigning = sha256('tc3_request', kService)
const signature = sha256(stringToSign, kSigning, 'hex')
console.log(signature)
console.log("-----")

// ***** Step 4: Concatenate the Authorization *****
const authorization = algorithm + " " +
"Credential=" + SECRET_ID + "/" + credentialScope + ", " +
"SignedHeaders=" + signedHeaders + ", " +
"Signature=" + signature
console.log(authorization)
console.log("-----")

const Call_Information = 'curl -X POST ' + "https://" + endpoint
+ ' -H "Authorization: ' + authorization + '"'
+ ' -H "Content-Type: application/json; charset=utf-8"'
+ ' -H "Host: ' + endpoint + '"'
+ ' -H "X-TC-Action: ' + action + '"'
+ ' -H "X-TC-Timestamp: ' + timestamp.toString() + '"'
+ ' -H "X-TC-Version: ' + version + '"'
+ ' -H "X-TC-Region: ' + region + '"'
+ " -d '" + payload + '"'
console.log(Call_Information)
}
main()

```

C++

```

#include <iostream>
#include <iomanip>
#include <sstream>

```

```
#include <string>
#include <stdio.h>
#include <time.h>
#include <openssl/sha.h>
#include <openssl/hmac.h>

using namespace std;

string get_data(int64_t &timestamp)
{
    string utcDate;
    char buff[20] = {0};
    // time_t timenow;
    struct tm sttime;
    sttime = *gmtime(&timestamp);
    strftime(buff, sizeof(buff), "%Y-%m-%d", &sttime);
    utcDate = string(buff);
    return utcDate;
}

string int2str(int64_t n)
{
    std::stringstream ss;
    ss << n;
    return ss.str();
}

string sha256Hex(const string &str)
{
    char buf[3];
    unsigned char hash[SHA256_DIGEST_LENGTH];
    SHA256_CTX sha256;
    SHA256_Init(&sha256);
    SHA256_Update(&sha256, str.c_str(), str.size());
    SHA256_Final(hash, &sha256);
    std::string NewString = "";
    for(int i = 0; i < SHA256_DIGEST_LENGTH; i++)
    {
        snprintf(buf, sizeof(buf), "%02x", hash[i]);
        NewString = NewString + buf;
    }
    return NewString;
}

string HmacSha256(const string &key, const string &input)
{
    unsigned char hash[32];

    HMAC_CTX *h;
    #if OPENSSL_VERSION_NUMBER < 0x10100000L
    HMAC_CTX hmac;
```

```
HMAC_CTX_init(&hmac);
h = &hmac;
#else
h = HMAC_CTX_new();
#endif

HMAC_Init_ex(h, &key[0], key.length(), EVP_sha256(), NULL);
HMAC_Update(h, ( unsigned char* )&input[0], input.length());
unsigned int len = 32;
HMAC_Final(h, hash, &len);

#if OPENSSSL_VERSION_NUMBER < 0x10100000L
HMAC_CTX_cleanup(h);
#else
HMAC_CTX_free(h);
#endif

std::stringstream ss;
ss << std::setfill('0');
for (int i = 0; i < len; i++)
{
    ss << hash[i];
}

return (ss.str());
}

string HexEncode(const string &input)
{
    static const char* const lut = "0123456789abcdef";
    size_t len = input.length();

    string output;
    output.reserve(2 * len);
    for (size_t i = 0; i < len; ++i)
    {
        const unsigned char c = input[i];
        output.push_back(lut[c >> 4]);
        output.push_back(lut[c & 15]);
    }
    return output;
}

int main()
{
    string SECRET_ID = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****";
    string SECRET_KEY = "Gu5t9xGARNpq86cd98joQYCN3*****";

    string service = "cvm";
```

```

string host = "cvm.tencentcloudapi.com";
string region = "ap-guangzhou";
string action = "DescribeInstances";
string version = "2017-03-12";
int64_t timestamp = 1551113065;
string date = get_data(timestamp);

// ***** Step 1: Concatenate the CanonicalRequest string *****
string httpRequestMethod = "POST";
string canonicalUri = "/";
string canonicalQueryString = "";
string canonicalHeaders = "content-type:application/json; charset=utf-8\nhost:" + host + "\n";
string signedHeaders = "content-type;host";
string payload = "{¥\"Limit¥\": 1, ¥\"Filters¥\": [{¥\"Values¥\": [¥\"unnamed¥\"], ¥\"Name¥\": ¥\"instance-n
ame¥\"}]}}";
string hashedRequestPayload = sha256Hex(payload);
string canonicalRequest = httpRequestMethod + "\n" + canonicalUri + "\n" + canonicalQueryString +
"\n"
+ canonicalHeaders + "\n" + signedHeaders + "\n" + hashedRequestPayload;
cout << canonicalRequest << endl;
cout << "-----" << endl;

// ***** Step 2: Concatenate the string to sign *****
string algorithm = "TC3-HMAC-SHA256";
string RequestTimestamp = int2str(timestamp);
string credentialScope = date + "/" + service + "/" + "tc3_request";
string hashedCanonicalRequest = sha256Hex(canonicalRequest);
string stringToSign = algorithm + "\n" + RequestTimestamp + "\n" + credentialScope + "\n" + hashe
dCanonicalRequest;
cout << stringToSign << endl;
cout << "-----" << endl;

// ***** Step 3: Calculate the signature *****
string kKey = "TC3" + SECRET_KEY;
string kDate = HmacSha256(kKey, date);
string kService = HmacSha256(kDate, service);
string kSigning = HmacSha256(kService, "tc3_request");
string signature = HexEncode(HmacSha256(kSigning, stringToSign));
cout << signature << endl;
cout << "-----" << endl;

// ***** Step 4: Concatenate the Authorization *****
string authorization = algorithm + " " + "Credential=" + SECRET_ID + "/" + credentialScope + ", "
+ "SignedHeaders=" + signedHeaders + ", " + "Signature=" + signature;
cout << authorization << endl;
cout << "-----" << endl;

string headers = "curl -X POST https://" + host + "\n"

```

```

+ " -H ¥"Authorization: " + authorization + "¥n"
+ " -H ¥"Content-Type: application/json; charset=utf-8¥"" + "¥n"
+ " -H ¥"Host: " + host + "¥n"
+ " -H ¥"X-TC-Action: " + action + "¥n"
+ " -H ¥"X-TC-Timestamp: " + RequestTimestamp + "¥n"
+ " -H ¥"X-TC-Version: " + version + "¥n"
+ " -H ¥"X-TC-Region: " + region + "¥n"
+ " -d ' ' " + payload;
cout << headers << endl;
return 0;
};

```

Signature Failure

The following situational error codes for signature failure may occur. Please resolve the errors accordingly.

Error Code	Description
AuthFailure.SignatureExpire	Signature expired. Timestamp and server time cannot differ by more than five minutes.
AuthFailure.SecretIdNotFound	The key does not exist. Please go to the console to check whether it is disabled or you copied fewer or more characters.
AuthFailure.SignatureFailure	Signature error. It is possible that the signature was calculated incorrectly, the signature does not match the content actually sent, or the SecretKey is incorrect.
AuthFailure.TokenFailure	Temporary certificate token error.
AuthFailure.InvalidSecretId	Invalid key (not a TencentCloud API key type).

Signature

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Tencent Cloud API authenticates each access request, i.e. each request needs to include authentication information (Signature) in the common parameters to verify the identity of the requester.

The Signature is generated by the security credentials which include SecretId and SecretKey. If you don't have the security credentials yet, go to the [TencentCloud API Key](#) page to apply for them; otherwise, you cannot invoke the TencentCloud API.

1. Applying for Security Credentials

Before using the TencentCloud API for the first time, go to the [TencentCloud API Key](#) page to apply for security credentials.

Security credentials consist of SecretId and SecretKey:

- SecretId is used to identify the API requester.
- SecretKey is used to encrypt the signature string and verify it on the server.
- **You must keep your security credentials private and avoid disclosure.**

You can apply for the security credentials through the following steps:

1. Log in to the [Tencent Cloud Console](#).
2. Go to the [TencentCloud API Key](#) page.
3. On the [API Key Management](#) page, click **Create Key** to create a SecretId/SecretKey pair.

Note: Each account can have up to two pairs of SecretId/SecretKey.

2. Generating a Signature

With the SecretId and SecretKey, a signature can be generated. The following describes how to generate a signature:

Assume that the SecretId and SecretKey are:

- SecretId: AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****
- SecretKey: Gu5t9xGARNpq86cd98joQYCN3*****

Note: This is just an example. For actual operations, please use your own SecretId and SecretKey.

Take the Cloud Virtual Machine's request to view the instance list (DescribeInstances) as an example. When you invoke this API, the request parameters may be as follows:

Parameter name	Description	Parameter value
Action	Method name	DescribeInstances
SecretId	Key ID	AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****
Timestamp	Current timestamp	1465185768
Nonce	Random positive integer	11886
Region	Region where the instance is located	ap-guangzhou
InstanceIds.0	ID of the instance to query	ins-09dx96dg
Offset	Offset	0
Limit	Allowed maximum output	20
Version	API version number	2017-03-12

2.1. Sorting Parameters

First, sort all the request parameters in an ascending lexicographical order (ASCII code) by their names. Notes: (1) Parameters are sorted by their names instead of their values; (2) The parameters are sorted based on ASCII code, not in an alphabetical order or by values. For example, InstanceIds.2 should be arranged after InstanceIds.12. You can complete the sorting process using a sorting function in a programming language, such as the ksort function in PHP. The parameters in the example are sorted as follows:

```
{
  'Action' : 'DescribeInstances',
  'InstanceIds.0' : 'ins-09dx96dg',
  'Limit' : 20,
  'Nonce' : 11886,
  'Offset' : 0,
  'Region' : 'ap-guangzhou',
  'SecretId' : 'AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****',
  'Timestamp' : 1465185768,
```

```
'Version': '2017-03-12',  
}
```

When developing in another programming language, you can sort these sample parameters and it will work as long as you obtain the same results.

2.2. Concatenating a Request String

This step generates a request string.

Format the request parameters sorted in the previous step into the form of "parameter name"="parameter value". For example, for the Action parameter, its parameter name is "Action" and its parameter value is "DescribeInstances", so it will become Action=DescribeInstances after formatted.

Note: The "parameter value" is the original value but not the value after URL encoding.

Then, concatenate the formatted parameters with "&". The resulting request string is as follows:

```
Action=DescribeInstances&InstanceIds.0=ins-09dx96dg&Limit=20&Nonce=11886&Offset=0&Region=ap-guang  
zhou&SecretId=AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****&Timestamp=1465185768&Version=2017-03-12
```

2.3. Concatenating the Signature Original String

This step generates a signature original string.

The signature original string consists of the following parameters:

1. HTTP method: POST and GET modes are supported, and GET is used here for the request. Please note that the method name should be in all capital letters.
2. Request server: the domain name of the request to view the list of instances (DescribeInstances) is cvm.tencentcloudapi.com. The actual request domain name varies by the module to which the API belongs. For more information, see the instructions of the specific API.
3. Request path: The request path in the current version of TencentCloud API is fixed to /.
4. Request string: the request string generated in the previous step.

The concatenation rule of the signature original string is: Request method + request host + request path + ? + request string

The concatenation result of the example is:

```
GETcvm.tencentcloudapi.com/?Action=DescribeInstances&InstanceIds.0=ins-09dx96dg&Limit=20&Nonce=11  
886&Offset=0&Region=ap-guangzhou&SecretId=AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****&Timestamp=14651857  
68&Version=2017-03-12
```

2.4. Generating a Signature String

This step generates a signature string.

First, use the HMAC-SHA1 algorithm to sign the **signature original string** obtained in the previous step, and then encode the generated signature using Base64 to obtain the final signature.

The specific code is as follows with the PHP language being used as an example:

```
$secretKey = 'Gu5t9xGARNpq86cd98joQYCN3*****';  
$srcStr = 'GETcvm.tencentcloudapi.com/?Action=DescribeInstances&InstanceIds.0=ins-09dx96dg&Limit=20&Nonce=11886&offset=0&Region=ap-guangzhou&SecretId=AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****&Timestamp=1465185768&Version=2017-03-12';  
$signStr = base64_encode(hash_hmac('sha1', $srcStr, $secretKey, true));  
echo $signStr;
```

The final signature is:

```
zmmjn35mikh6pM3V7sUEuX4wyYM=
```

When developing in another programming language, you can sign and verify the original in the example above and it works as long as you get the same results.

3. Encoding a Signature String

The generated signature string cannot be directly used as a request parameter and must be URL encoded.

For example, if the signature string generated in the previous step is zmmjn35mikh6pM3V7sUEuX4wyYM=, the final signature string request parameter (Signature) is zmmjn35mikh6pM3V7sUEuX4wyYM%3D, which will be used to generate the final request URL.

Note: If your request method is GET, or the request method is POST and the Content-Type is application/x-www-form-urlencoded, then all the request parameter values need to be URL encoded (except the parameter key and the symbol of =) when sending the request. Non-ASCII characters need to be encoded with UTF-8 before URL encoding.

Note: The network libraries of some programming languages automatically URL encode all parameters, in which case there is no need to URL encode the signature string; otherwise, two rounds of URL encoding will cause the signature to fail.

Note: Other parameter values also need to be encoded using [RFC 3986](#). Use %XY in percent-encoding for special characters such as Chinese characters, where "X" and "Y" are hexadecimal characters (0-9 and uppercase A-F), and using lowercase will cause an error.

4. Signature Failure

The following situational error codes for signature failure may occur. Please resolve the errors accordingly.

Error code	Error description
AuthFailure.SignatureExpire	The signature is expired
AuthFailure.SecretIdNotFound	The key does not exist
AuthFailure.SignatureFailure	Signature error
AuthFailure.TokenFailure	Token error
AuthFailure.InvalidSecretId	Invalid key (not a TencentCloud API key type)

5. Signature Demo

When calling API 3.0, you are recommended to use the corresponding Tencent Cloud SDK 3.0 which encapsulates the signature process, enabling you to focus on only the specific APIs provided by the product when developing. See [SDK Center](#) for more information. Currently, the following programming languages are supported:

- [Python](#)
- [Java](#)
- [PHP](#)
- [Go](#)
- [NodeJS](#)
- [.NET](#)

To further explain the signing process, we will use a programming language to implement the process described above. The request domain name, API and parameter values in the sample are used here. This goal of this example is only to provide additional clarification for the signature process, please see the SDK for actual usage.

The final output URL might be:

```
https://cvm.tencentcloudapi.com/?Action=DescribeInstances&InstanceId.0=ins-09dx96dg&Limit=20&Nonce=11886&Offset=0&Region=ap-guangzhou&SecretId=AKIDz8krbsJ5yKBZQpn74WFkmlPx3*****&Signature=zmmjn35mikh6pM3V7sUEuX4wyYM%3D&Timestamp=1465185768&Version=2017-03-12
```

Note: The key in the example is fictitious, and the timestamp is not the current time of the system, so if this URL is opened in the browser or called using commands such as curl, an authentication error will be returned: Signature expired. In order to get a URL that can work properly, you need to replace the SecretId and SecretKey in the example with your real credentials and use the current time of the system as the Timestamp.

Note: In the example below, even if you use the same programming language, the order of the parameters in the URL may be different for each execution. However, the order does not matter, as long as all the parameters are included in the URL and the signature is calculated correctly.

Note: The following code is only applicable to API 3.0. It cannot be directly used in other signature processes. Even with an older API, signature calculation errors may occur due to the differences in details. Please refer to the corresponding documentation.

Java

```
import java.io.UnsupportedEncodingException;
import java.net.URLEncoder;
import java.util.Random;
import java.util.TreeMap;
import javax.crypto.Mac;
import javax.crypto.spec.SecretKeySpec;
import javax.xml.bind.DatatypeConverter;

public class TencentCloudAPIDemo {
    private final static String CHARSET = "UTF-8";

    public static String sign(String s, String key, String method) throws Exception {
        Mac mac = Mac.getInstance(method);
        SecretKeySpec secretKeySpec = new SecretKeySpec(key.getBytes(CHARSET), mac.getAlgorithm());
        mac.init(secretKeySpec);
        byte[] hash = mac.doFinal(s.getBytes(CHARSET));
        return DatatypeConverter.printBase64Binary(hash);
    }

    public static String getStringToSign(TreeMap<String, Object> params) {
        StringBuilder s2s = new StringBuilder("GETcvm.tencentcloudapi.com/?");
        // When signing, the parameters need to be sorted in lexicographical order. TreeMap is used here
        // to guarantee the correct order.
        for (String k : params.keySet()) {
            s2s.append(k).append("=").append(params.get(k).toString()).append("&");
        }
        return s2s.toString().substring(0, s2s.length() - 1);
    }

    public static String getUrl(TreeMap<String, Object> params) throws UnsupportedEncodingException {
        StringBuilder url = new StringBuilder("https://cvm.tencentcloudapi.com/?");
        // There is no requirement for the order of the parameters in the actual request URL.
        for (String k : params.keySet()) {
            // The request string needs to be URL encoded. As the Key is all in English letters, only the val
```

```

ue is URL encoded here.
url.append(k).append("=").append(URLEncoder.encode(params.get(k).toString(), CHARSET)).append("&");
}
return url.toString().substring(0, url.length() - 1);
}

public static void main(String[] args) throws Exception {
    TreeMap<String, Object> params = new TreeMap<String, Object>(); // TreeMap enables automatic sorting
    // A random number should be used when actually calling, for example: params.put("Nonce", new Random().nextInt(java.lang.Integer.MAX_VALUE));
    params.put("Nonce", 11886); // Common parameter
    // The current time of the system should be used when actually calling, for example: params.put("Timestamp", System.currentTimeMillis() / 1000);
    params.put("Timestamp", 1465185768); // Common parameter
    params.put("SecretId", "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****"); // Common parameter
    params.put("Action", "DescribeInstances"); // Common parameter
    params.put("Version", "2017-03-12"); // Common parameter
    params.put("Region", "ap-guangzhou"); // Common parameter
    params.put("Limit", 20); // Business parameter
    params.put("Offset", 0); // Business parameter
    params.put("InstanceIds.0", "ins-09dx96dg"); // Business parameter
    params.put("Signature", sign(getStringToSign(params), "Gu5t9xGARNpq86cd98joQYCN3*****", "HmacSHA1")); // Common parameter
    System.out.println(getUrl(params));
}
}

```

Python

Note: If running in a Python 2 environment, the following requests dependency package must be installed first: `pip install requests`.

```

# -*- coding: utf8 -*-
import base64
import hashlib
import hmac
import time
import requests

secret_id = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****"
secret_key = "Gu5t9xGARNpq86cd98joQYCN3*****"

def get_string_to_sign(method, endpoint, params):
    s = method + endpoint + "/"
    query_str = "&".join("%s=%s" % (k, params[k]) for k in sorted(params))
    return s + query_str

def sign_str(key, s, method):
    hmac_str = hmac.new(key.encode("utf8"), s.encode("utf8"), method).digest()

```

```

return base64.b64encode(hmac_str)
if __name__ == '__main__':
    endpoint = "cvm.tencentcloudapi.com"
    data = {
        'Action': 'DescribeInstances',
        'InstanceIds.0': 'ins-09dx96dg',
        'Limit': 20,
        'Nonce': 11886,
        'Offset': 0,
        'Region': 'ap-guangzhou',
        'SecretId': secret_id,
        'Timestamp': 1465185768, # int(time.time())
        'Version': '2017-03-12'
    }
    s = get_string_to_sign("GET", endpoint, data)
    data["Signature"] = sign_str(secret_key, s, hashlib.sha1)
    print(data["Signature"])
    # An actual invocation would occur here, which may incur fees after success
    # resp = requests.get("https://" + endpoint, params=data)
    # print(resp.url)

```

Golang

```

package main
import (
    "bytes"
    "crypto/hmac"
    "crypto/sha1"
    "encoding/base64"
    "fmt"
    "sort"
)
func main() {
    secretId := "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****"
    secretKey := "Gu5t9xGARNpq86cd98joQYCN3*****"
    params := map[string]string{
        "Nonce": "11886",
        "Timestamp": "1465185768",
        "Region": "ap-guangzhou",
        "SecretId": secretId,
        "Version": "2017-03-12",
        "Action": "DescribeInstances",
        "InstanceIds.0": "ins-09dx96dg",
        "Limit": "20",
        "Offset": "0",
    }
    var buf bytes.Buffer

```

```

buf.WriteString("GET")
buf.WriteString("cvm.tencentcloudapi.com")
buf.WriteString("/")
buf.WriteString("?")
// sort keys by ascii asc order
keys := make([]string, 0, len(params))
for k, _ := range params {
    keys = append(keys, k)
}
sort.Strings(keys)
for i := range keys {
    k := keys[i]
    buf.WriteString(k)
    buf.WriteString("=")
    buf.WriteString(params[k])
    buf.WriteString("&")
}
buf.Truncate(buf.Len() - 1)
hashed := hmac.New(sha1.New, []byte(secretKey))
hashed.Write(buf.Bytes())
fmt.Println(base64.StdEncoding.EncodeToString(hashed.Sum(nil)))
}

```

PHP

```

<?php
$secretId = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****";
$secretKey = "Gu5t9xGARNpq86cd98joQYCN3*****";
$params["Nonce"] = 11886;//rand();
$params["Timestamp"] = 1465185768;//time();
$params["Region"] = "ap-guangzhou";
$params["SecretId"] = $secretId;
$params["Version"] = "2017-03-12";
$params["Action"] = "DescribeInstances";
$params["InstanceIds.0"] = "ins-09dx96dg";
$params["Limit"] = 20;
$params["Offset"] = 0;
ksort($params);
$signStr = "GETcvm.tencentcloudapi.com/?";
foreach ( $params as $key => $value ) {
    $signStr = $signStr . $key . "=" . $value . "&";
}
$signStr = substr($signStr, 0, -1);
$signature = base64_encode(hash_hmac("sha1", $signStr, $secretKey, true));
echo $signature.PHP_EOL;
// need to install and enable curl extension in php.ini
// $params["Signature"] = $signature;

```

```
// $url = "https://cvm.tencentcloudapi.com/?".http_build_query($param);
// echo $url.PHP_EOL;
// $ch = curl_init();
// curl_setopt($ch, CURLOPT_URL, $url);
// $output = curl_exec($ch);
// curl_close($ch);
// echo json_decode($output);
```

Ruby

```
# -*- coding: UTF-8 -*-
# require ruby>=2.3.0
require 'time'
require 'openssl'
require 'base64'
secret_id = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****"
secret_key = "Gu5t9xGARNpq86cd98joQYCN3*****"
method = 'GET'
endpoint = 'cvm.tencentcloudapi.com'
data = {
  'Action' => 'DescribeInstances',
  'InstanceIds.0' => 'ins-09dx96dg',
  'Limit' => 20,
  'Nonce' => 11886,
  'Offset' => 0,
  'Region' => 'ap-guangzhou',
  'SecretId' => secret_id,
  'Timestamp' => 1465185768, # Time.now.to_i
  'Version' => '2017-03-12',
}
sign = method + endpoint + '/?'
params = []
data.sort.each do |item|
  params << "#{item[0]}=#{item[1]}"
end
sign += params.join('&')
digest = OpenSSL::Digest.new('sha1')
data['Signature'] = Base64.encode64(OpenSSL::HMAC.digest(digest, secret_key, sign))
puts data['Signature']
# require 'net/http'
# uri = URI('https://' + endpoint)
# uri.query = URI.encode_www_form(data)
# p uri
# res = Net::HTTP.get_response(uri)
# puts res.body
```

DotNet

```
using System;
using System.Collections.Generic;
using System.Net;
using System.Security.Cryptography;
using System.Text;
public class Application {
    public static string Sign(string signKey, string secret)
    {
        string signRet = string.Empty;
        using (HMACSHA1 mac = new HMACSHA1(Encoding.UTF8.GetBytes(signKey)))
        {
            byte[] hash = mac.ComputeHash(Encoding.UTF8.GetBytes(secret));
            signRet = Convert.ToBase64String(hash);
        }
        return signRet;
    }
    public static string MakeSignPlainText(SortedDictionary<string, string> requestParams, string requestMethod, string requestHost, string requestPath)
    {
        string retStr = "";
        retStr += requestMethod;
        retStr += requestHost;
        retStr += requestPath;
        retStr += "?";
        string v = "";
        foreach (string key in requestParams.Keys)
        {
            v += string.Format("{0}={1}&", key, requestParams[key]);
        }
        retStr += v.TrimEnd('&');
        return retStr;
    }
    public static void Main(string[] args)
    {
        string SECRET_ID = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****";
        string SECRET_KEY = "Gu5t9xGARNpq86cd98joQYCN3*****";
        string endpoint = "cvm.tencentcloudapi.com";
        string region = "ap-guangzhou";
        string action = "DescribeInstances";
        string version = "2017-03-12";
        double RequestTimestamp = 1465185768;
        // long timestamp = ToTimestamp() / 1000;
        // string requestTimestamp = timestamp.ToString();
        Dictionary<string, string> param = new Dictionary<string, string>();
        param.Add("Limit", "20");
    }
}
```

```

param.Add("Offset", "0");
param.Add("InstanceIds.0", "ins-09dx96dg");
param.Add("Action", action);
param.Add("Nonce", "11886");
// param.Add("Nonce", Math.Abs(new Random().Next()).ToString());
param.Add("Timestamp", RequestTimestamp.ToString());
param.Add("Version", version);
param.Add("SecretId", SECRET_ID);
param.Add("Region", region);
SortedDictionary<string, string> headers = new SortedDictionary<string, string>(param, StringComparer.Ordinal);
string sigInParam = MakeSignPlainText(headers, "GET", endpoint, "/");
Console.WriteLine(sigInParam);
string sigOutParam = Sign(SECRET_KEY, sigInParam);
Console.WriteLine("GET https://cvm.tencentcloudapi.com");
foreach (KeyValuePair<string, string> kv in headers)
{
    Console.WriteLine(kv.Key + ": " + kv.Value);
}
Console.WriteLine("Signature" + ": " + WebUtility.UrlEncode(sigOutParam));
Console.WriteLine();
string result = "https://cvm.tencentcloudapi.com/?";
foreach (KeyValuePair<string, string> kv in headers)
{
    result += WebUtility.UrlEncode(kv.Key) + "=" + WebUtility.UrlEncode(kv.Value) + "&";
}
result += WebUtility.UrlEncode("Signature") + "=" + WebUtility.UrlEncode(sigOutParam);
Console.WriteLine("GET " + result);
}
}

```

NodeJS

```

const crypto = require('crypto');
function get_req_url(params, endpoint){
    params['Signature'] = escape(params['Signature']);
    const url_strParam = sort_params(params)
    return "https://" + endpoint + "/" + url_strParam.slice(1);
}
function formatSignString(reqMethod, endpoint, path, strParam){
    let strSign = reqMethod + endpoint + path + "?" + strParam.slice(1);
    return strSign;
}
function sha1(secretKey, strsign){
    let signMethodMap = {'HmacSHA1': "sha1"};
    let hmac = crypto.createHmac(signMethodMap['HmacSHA1'], secretKey || "");
    return hmac.update(Buffer.from(strsign, 'utf8')).digest('base64')
}

```

```
}  
  
function sort_params(params){  
  let strParam = "";  
  let keys = Object.keys(params);  
  keys.sort();  
  for (let k in keys) {  
    //k = k.replace(/_/g, '.');  
    strParam += ("&" + keys[k] + "=" + params[keys[k]]);  
  }  
  return strParam  
}  
  
function main(){  
  const SECRET_ID = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****"  
  const SECRET_KEY = "Gu5t9xGARNpq86cd98joQYCN3*****"  
  const endpoint = "cvm.tencentcloudapi.com"  
  const Region = "ap-guangzhou"  
  const Version = "2017-03-12"  
  const Action = "DescribeInstances"  
  const Timestamp = 1465185768  
  // const Timestamp = Math.round(Date.now() / 1000)  
  const Nonce = 11886  
  //const nonce = Math.round(Math.random() * 65535)  
  let params = {};  
  params['Action'] = Action;  
  params['InstanceIds.0'] = 'ins-09dx96dg';  
  params['Limit'] = 20;  
  params['Offset'] = 0;  
  params['Nonce'] = Nonce;  
  params['Region'] = Region;  
  params['SecretId'] = SECRET_ID;  
  params['Timestamp'] = Timestamp;  
  params['Version'] = Version;  
  strParam = sort_params(params)  
  const reqMethod = "GET";  
  const path = "/";  
  strSign = formatSignString(reqMethod, endpoint, path, strParam)  
  console.log(strSign)  
  console.log("-----")  
  params['Signature'] = sha1(SECRET_KEY, strSign)  
  console.log(params['Signature'])  
  console.log("-----")  
  const req_url = get_req_url(params, endpoint)  
  console.log(params['Signature'])  
  console.log("-----")  
  console.log(req_url)  
}  
main()
```

Responses

Last updated : 2021-03-31 15:04:33

Response for Successful Requests

For example, when calling CAM API (version: 2017-03-12) to view the status of instances (DescribeInstancesStatus), if the request has succeeded, you may see the response as shown below:

```
{
  "Response": {
    "TotalCount": 0,
    "InstanceStatusSet": [],
    "RequestId": "b5b41468-520d-4192-b42f-595cc34b6c1c"
  }
}
```

- The API will return `Response` , which contains `RequestId` , as long as it processes the request. It does not matter if the request is successful or not.
- `RequestId` is the unique ID of an API request. Contact us with this ID when an exception occurs.
- Except for the fixed fields, all fields are action-specified. For the definitions of action-specified fields, see the corresponding API documentation. In this example, `TotalCount` and `InstanceStatusSet` are the fields specified by the API `DescribeInstancesStatus` . 0 `TotalCount` means that the requester owns 0 CVM instance so the `InstanceStatusSet` is empty.

Response for Failed Requests

If the request has failed, you may see the response as shown below:

```
{
  "Response": {
    "Error": {
      "Code": "AuthFailure.SignatureFailure",
      "Message": "The provided credentials could not be validated. Please ensure your signature is correct."
    },
    "RequestId": "ed93f3cb-f35e-473f-b9f3-0d451b8b79c6"
  }
}
```

- The presence of the `Error` field indicates that the request has failed. A response for a failed request will include `Error` , `Code` and `Message` fields.
- `Code` is the code of the error that helps you identify the cause and solution. There are two types of error codes so you may find the code in either common error codes or API-specified error codes.
- Message explains the cause of the error. Note that the returned messages are subject to service updates. The information the messages provide may not be up-to-date and should not be the only source of reference.
- RequestId is the unique ID of an API request. Contact us with this ID when an exception occurs.

Common Error Codes

If there is an `Error` field in the response, it means that the API call failed. The `Code` field in `Error` indicates the error code. The following table lists the common error codes that all actions can return.

Error Code	Description
<code>AuthFailure.InvalidSecretId</code>	Invalid key (not a TencentCloud API key type).
<code>AuthFailure.MFAFailure</code>	MFA failed.
<code>AuthFailure.SecretIdNotFound</code>	The key does not exist.
<code>AuthFailure.SignatureExpire</code>	Signature expired.
<code>AuthFailure.SignatureFailure</code>	Signature error.
<code>AuthFailure.TokenFailure</code>	Token error.
<code>AuthFailure.UnauthorizedOperation</code>	The request does not have CAM authorization.
<code>DryRunOperation</code>	DryRun Operation. It means that the request would have succeeded, but the DryRun parameter was used.
<code>FailedOperation</code>	Operation failed.
<code>InternalError</code>	Internal error.
<code>InvalidAction</code>	The API does not exist.
<code>InvalidParameter</code>	Incorrect parameter.
<code>InvalidParameterValue</code>	Invalid parameter value.
<code>LimitExceeded</code>	Quota limit exceeded.

MissingParameter	A parameter is missing.
NoSuchVersion	The API version does not exist.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceInUse	Resource is in use.
ResourceInsufficient	Insufficient resource.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	Resource is unavailable.
UnauthorizedOperation	Unauthorized operation.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.
UnsupportedProtocol	HTTPS request method error. Only GET and POST requests are supported.
UnsupportedRegion	API does not support the requested region.

Matchmaking Process APIs

ModifyToken

Last updated : 2021-04-06 14:12:01

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to modify the token of a Matchcode.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: ModifyToken.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
MatchCode	Yes	String	MatchCode
CompatibleSpan	Yes	Integer	The time period during which GPM will continuously push the original token in seconds to the user when the token is replaced. Value range: 0 - 1800. Within

			the CompatibleSpan time period, user will receive the current and original token in the event notification.
MatchToken	No	String	Token. It can contain 0 - 64 characters, supporting [a-zA-Z0-9-_.]. If this parameter is left empty, the token will be randomly generated by GPM.

3. Output Parameters

Parameter Name	Type	Description
MatchToken	String	Token that has been set successfully.
CompatibleSpan	Integer	The time period during which GPM will continuously push the original token in seconds to the user when the token is replaced. Note: this field may return <code>null</code> , indicating that no valid value is obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Updating the token of a Matchcode

Input Example

```
https://gpm.tencentcloudapi.com/?Action=ModifyToken
&MatchCode=match-58mnuqlz
&MatchToken=mytoken
&CompatibleSpan=300
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "MatchToken": "mytoken",
    "CompatibleSpan": 180,
    "RequestId": "ab6ab15a-ab3a-495c-8818-e826084ea072"
```

```
}  
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
InvalidParameterValue.TokenCompatibleSpanInvalid	The CompatibleSpan of the token exceeds the limit.
InvalidParameterValue.TokenLimit	The token length exceeds the limit.
LimitExceeded.TokenUpdateExceed	The token update frequency exceeds the limit.

DescribeToken

Last updated : 2021-04-06 14:12:01

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to query the token of a Matchcode, which is used for verified the pushed message.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: DescribeToken.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
MatchCode	Yes	String	MatchCode

3. Output Parameters

Parameter	Type	Description
-----------	------	-------------

Name		
MatchToken	String	The token corresponding to the current MatchCode. If the current MatchCode does not have a token, this parameter may not obtain a valid value. Note: this field may return <code>null</code> , indicating that no valid value is obtained.
CompatibleSpan	Integer	The time period during which GPM will continuously push the original token in seconds when the token is replaced. Note: this field may return <code>null</code> , indicating that no valid value is obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the token of a Matchcode

Input Example

```
https://gpm.tencentcloudapi.com/?Action=DescribeToken
&MatchCode=match-58mnuqlz
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "MatchToken": "mytoken",
    "CompatibleSpan": 180,
    "RequestId": "ab6ab15a-ab3a-495c-8818-e826084ea072"
  }
}
```

5. Developer Resources

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- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
InternalServerError	Internal error
InvalidParameterValue.MatchCodeNotFound	MatchCode does not exist.
InvalidParameterValue.MatchNotFound	The matchmaking does not exist.

StartMatchingBackfill

Last updated : 2021-05-17 15:04:12

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to send a match backfill request, for which a MatchTicket will be searched to start a new match.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: StartMatchingBackfill.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
MatchCode	Yes	String	MatchCode
Players.N	Yes	Array of Player	Player information

GameServerSessionId	Yes	String	Game server session ID. It should contain 1 to 256 ASCII characters.
MatchTicketId	No	String	MatchTicket ID, which can contain 1 to 128 characters. This parameter is left empty by default, and in this case, MatchTicket ID will be automatically generated by GPM.

3. Output Parameters

Parameter Name	Type	Description
MatchTicket	MatchTicket	MatchTicket Note: this field may return <code>null</code> , indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Starting match backfill

Input Example

```
https://gpm.tencentcloudapi.com/?Action=StartMatchingBackfill
&MatchCode=match_code
&MatchTicketId=match_ticket_id
&Players.0.Id=player_id_0
&Players.0.Name=player_name
&Players.0.Team=player_team
&Players.0.CustomPlayerStatus=0
&Players.0.CustomProfile=player_custom_profile
&Players.0.MatchAttributes.0.Name=player_match_attributes_name
&Players.0.MatchAttributes.0.Type=0
&Players.0.MatchAttributes.0.NumberValue=10
&Players.0.RegionLatencies.0.Region=ap-shanghai
&Players.0.RegionLatencies.0.Latency=100
&GameServerSessionId=game_server_session_id
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "MatchTicket": {
      "EndTime": "",
      "Id": "ml0urJm",
      "MatchCode": "match-lipp",
      "MatchResult": "",
      "MatchType": "",
      "Players": [
        {
          "CustomPlayerStatus": 0,
          "CustomProfile": "",
          "Id": "fisher0",
          "MatchAttributes": [
            {
              "ListValue": [],
              "MapValue": [],
              "Name": "numberAttr",
              "NumberValue": 10,
              "StringValue": "",
              "Type": 0
            },
            {
              "ListValue": [],
              "MapValue": [],
              "Name": "stringAttr",
              "NumberValue": 0,
              "StringValue": "stringAttrVal",
              "Type": 1
            },
            {
              "ListValue": [
                "listAttrVal1",
                "listAttrVal2",
                "listAttrVal3"
              ],
              "MapValue": [],
              "Name": "listAttr",
              "NumberValue": 0,
              "StringValue": "",
              "Type": 2
            },
            {
              "ListValue": [],
              "MapValue": [
```

```
{
  "Key": "mapAttrVal1",
  "Value": 10
},
{
  "Key": "mapAttrVal2",
  "Value": 20
},
{
  "Key": "mapAttrVal3",
  "Value": 30
}
],
"Name": "mapAttr",
"NumberValue": 0,
"StringValue": "",
"Type": 3
},
{
  "Name": "playerName0",
  "RegionLatencies": [
    {
      "Latency": 100,
      "Region": "ap-guangzhou"
    },
    {
      "Latency": 100,
      "Region": "ap-beijing"
    }
  ],
  "Team": "playerTeam0"
},
{
  "StartTime": "2020-09-05T11:11:15Z",
  "Status": "TIMEDOUT",
  "StatusMessage": "",
  "StatusReason": ""
},
"RequestId": "1a68664b-d796-407b-ab7b-2dbc2a12f8f5"
}
```

5. Developer Resources

SDK

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- [Tencent Cloud SDK 3.0 for Java](#)
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- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
AuthFailure	CAM signature/authentication error
FailedOperation	Operation failed
FailedOperation.FrequencySamePlayerLimited	Frequency limit. The interval between the player's repeated request for matchmaking shall not be less than 100 ms.
FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
InternalError	Internal error
InvalidAction	The API does not exist.
InvalidParameter	Parameter error
InvalidParameterValue	Invalid parameter value
InvalidParameterValue.GameServerSessionRepeated	A GameServerSession is in progress. Start another session until this one is

	completed.
InvalidParameterValue.InvalidRuleScript	Incorrect rule script
InvalidParameterValue.MatchCodeNotFound	MatchCode does not exist.
InvalidParameterValue.MatchFeildValueLimit	The length of field value exceeds the limit.
InvalidParameterValue.MatchInvalidCharacters	Field contains invalid characters.
InvalidParameterValue.MatchPlayersLimit	The number of players exceeds the limit.
InvalidParameterValue.MatchPlayersRepeated	The player ID already exists.
InvalidParameterValue.MatchTicketIdNotFound	The MatchTicket ID does not exist.
InvalidParameterValue.MatchTicketIdRepeated	The MatchTicket ID already exists.
InvalidParameterValue.RuleNotFound	The rule does not exist.
LimitExceeded	Quota limit exceeded.
MissingParameter	The parameter is missing.
NoSuchVersion	API version does not exist.
OperationDenied	Operation denied
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceUnavailable	The resource is unavailable.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.UnauthorizedAction	API permission authorization is needed.
UnknownParameter	Unknown parameter error
UnsupportedOperation	Unsupported operation
UnsupportedRegion	The API does not support the region passed in.

CancelMatching

Last updated : 2021-04-06 14:12:02

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to cancel matching.

A maximum of 100 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: CancelMatching.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
MatchCode	Yes	String	MatchCode
MatchTicketId	Yes	String	The MatchTicket ID of the matchmaking to cancel

3. Output Parameters

Parameter Name	Type	Description
ErrCode	Integer	Error code
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Canceling matching

Input Example

```
https://gpm.tencentcloudapi.com/?Action=CancelMatching
&MatchCode=match_code_1
&MatchTicketId=match_ticket_id_1
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "ErrCode": 0,
    "RequestId": "5c680029-66b2-4be8-9630-7bd316ce70dd"
  }
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)

- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
AuthFailure	CAM signature/authentication error
FailedOperation	Operation failed
FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
InternalError	Internal error
InvalidAction	The API does not exist.
InvalidParameter	Parameter error
InvalidParameterValue	Invalid parameter value
InvalidParameterValue.MatchCodeNotFound	MatchCode does not exist.
InvalidParameterValue.MatchStatusNotPermitCancel	The matchmaking cannot be canceled under the current status.
InvalidParameterValue.MatchTicketIdNotFound	The MatchTicket ID does not exist.
MissingParameter	The parameter is missing.
NoSuchVersion	API version does not exist.
ResourceUnavailable	The resource is unavailable.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.UnauthorizedAction	API permission authorization is needed.

UnknownParameter	Unknown parameter error
UnsupportedOperation	Unsupported operation
UnsupportedRegion	The API does not support the region passed in.

DescribeMatchingProgress

Last updated : 2021-04-06 14:12:01

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to query the matching progress.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: DescribeMatchingProgress.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
MatchTicketIds.N	Yes	Array of MTicket	List of MatchTicket IDs. It can contain up to 12 IDs.

3. Output Parameters

--	--	--

Parameter Name	Type	Description
MatchTickets	Array of MatchTicket	MatchTicket list Note: this field may return <code>null</code> , indicating that no valid value is obtained.
ErrCode	Integer	Error code Note: this field may return <code>null</code> , indicating that no valid value is obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining the matching progress information

Input Example

```
https://gpm.tencentcloudapi.com/?Action=DescribeMatchingProgress
&MatchTicketIds.0.MatchCode=match-lipp
&MatchTicketIds.0.MatchTicketId=ml0urJm
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "ErrCode": 0,
    "MatchTickets": [
      {
        "EndTime": "",
        "Id": "ml0urJm",
        "MatchCode": "match-lipp",
        "MatchResult": "",
        "MatchType": "",
        "Players": [
          {
            "CustomPlayerStatus": 0,
            "CustomProfile": "",
            "Id": "fisher0",
            "MatchAttributes": [
              {
```

```
"ListValue": [],
"MapValue": [],
"Name": "numberAttr",
"NumberValue": 10,
"StringValue": "",
"Type": 0
},
{
  "ListValue": [],
  "MapValue": [],
  "Name": "stringAttr",
  "NumberValue": 0,
  "StringValue": "stringAttrVal",
  "Type": 1
},
{
  "ListValue": [
    "listAttrVal1",
    "listAttrVal2",
    "listAttrVal3"
  ],
  "MapValue": [],
  "Name": "listAttr",
  "NumberValue": 0,
  "StringValue": "",
  "Type": 2
},
{
  "ListValue": [],
  "MapValue": [
    {
      "Key": "mapAttrVal1",
      "Value": 10
    },
    {
      "Key": "mapAttrVal2",
      "Value": 20
    },
    {
      "Key": "mapAttrVal3",
      "Value": 30
    }
  ],
  "Name": "mapAttr",
  "NumberValue": 0,
  "StringValue": "",
  "Type": 3
}
```

```
],
  "Name": "playerName0",
  "RegionLatencies": [
    {
      "Latency": 100,
      "Region": "ap-guangzhou"
    },
    {
      "Latency": 100,
      "Region": "ap-beijing"
    }
  ],
  "Team": "playerTeam0"
},
{
  "StartTime": "2020-09-05T11:11:15Z",
  "Status": "TIMEDOUT",
  "StatusMessage": "",
  "StatusReason": ""
},
{
  "RequestId": "1a68664b-d796-407b-ab7b-2dbc2a12f8f5"
}
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
AuthFailure	CAM signature/authentication error
FailedOperation	Operation failed
FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
InternalError	Internal error
InvalidAction	The API does not exist.
InvalidParameter	Parameter error
InvalidParameterValue	Invalid parameter value
InvalidParameterValue.MatchCodeNotFound	MatchCode does not exist.
InvalidParameterValue.MatchTicketIdNotFound	The MatchTicket ID does not exist.
InvalidParameterValue.MatchTicketLimit	The length of MatchTicket list exceeds the limit.
MissingParameter	The parameter is missing.
NoSuchVersion	API version does not exist.
OperationDenied	Operation denied
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceUnavailable	The resource is unavailable.
UnauthorizedOperation.UnauthorizedAction	API permission authorization is needed.
UnknownParameter	Unknown parameter error

StartMatching

Last updated : 2021-04-06 14:12:00

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to pass in one player or multiple players to initiate match. Players within the same request will be assigned to the same game session.

A maximum of 100 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: StartMatching.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
MatchCode	Yes	String	MatchCode
Players.N	Yes	Array of Player	Player information. Up to 200 entries can be entered.

MatchTicketId	No	String	MatchTicket ID, which can contain up to 128 characters and can only contain numbers, letters, ".", and "-". This parameter is left empty by default. When it is empty, the MatchTicket ID will be automatically generated by GPM.
---------------	----	--------	---

3. Output Parameters

Parameter Name	Type	Description
ErrCode	Integer	Error code
MatchTicketId	String	MatchTicket ID. Up to 128 characters are allowed.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Initiating match

Input Example

```
https://gpm.tencentcloudapi.com/?Action=StartMatching
&MatchCode=match_code
&MatchTicketId=match_ticket_id
&Players.0.Id=player_id_0
&Players.0.Name=player_name
&Players.0.Team=player_team
&Players.0.CustomPlayerStatus=0
&Players.0.CustomProfile=player_custom_profile
&Players.0.MatchAttributes.0.Name=player_match_attributes_name
&Players.0.MatchAttributes.0.Type=0
&Players.0.MatchAttributes.0.NumberValue=10
&Players.0.RegionLatencies.0.Region=ap-shanghai
&Players.0.RegionLatencies.0.Latency=100
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "ErrCode": 0,
    "MatchTicketId": "match_ticket_id",
    "RequestId": "5c680029-66b2-4be8-9630-7bd316ce70dd"
  }
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

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- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
AuthFailure	CAM signature/authentication error
FailedOperation	Operation failed
FailedOperation.FrequencySamePlayerLimited	Frequency limit. The interval between the player's repeated request for matchmaking shall not be less than 100 ms.

FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
InternalError	Internal error
InvalidAction	The API does not exist.
InvalidParameter	Parameter error
InvalidParameterValue	Invalid parameter value
InvalidParameterValue.InvalidRuleScript	Incorrect rule script
InvalidParameterValue.MatchCodeNotFound	MatchCode does not exist.
InvalidParameterValue.MatchFeildValueLimit	The length of field value exceeds the limit.
InvalidParameterValue.MatchInvalidCharacters	Field contains invalid characters.
InvalidParameterValue.MatchPlayersLimit	The number of players exceeds the limit.
InvalidParameterValue.MatchPlayersRepeated	The player ID already exists.
InvalidParameterValue.MatchTicketIdRepeated	The MatchTicket ID already exists.
InvalidParameterValue.RuleNotFound	The rule does not exist.
LimitExceeded	Quota limit exceeded.
MissingParameter	The parameter is missing.
NoSuchVersion	API version does not exist.
OperationDenied	Operation denied
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceUnavailable	The resource is unavailable.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.UnauthorizedAction	API permission authorization is needed.
UnknownParameter	Unknown parameter error
UnsupportedOperation	Unsupported operation
UnsupportedRegion	The API does not support the region passed in.

Console APIs

DescribeMatches

Last updated : 2021-05-17 15:04:12

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to query the matchmaking list and paginate the query result.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: DescribeMatches.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
PageNumber	No	Integer	The current page number. If this parameter is left empty, all queried matches will be obtained.
PageSize	No	Integer	Number of matchmaking lists per page. If this parameter is left empty, all queried matches will be

			obtained.
SearchType	No	String	Query type (optional). Valid values: match (query by matchCode or matchName), rule (query by ruleCode or ruleName), and other types (not filtered)
Keyword	No	String	Keyword. Enter a keyword about SearchType to query.
Tags.N	No	Array of Tag	Tags. Enter a tag for querying.

3. Output Parameters

Parameter Name	Type	Description
MatchInfoList	Array of MatchInfo	Matchmaking information list Note: this field may return <code>null</code> , indicating that no valid value is obtained.
TotalCount	Integer	Total number of results
PageNumber	Integer	The current page number. The first page will be returned by default if this parameter is left empty.
PageSize	Integer	The number of matches per page. If this parameter is left empty, 30 matches are displayed per page by default. Maximum value: 30
SearchType	String	Query type (optional). Valid values: matchName (query by match name), matchCode (query by matchCode), ruleName (query by rule name), and tag (query by tag key/value)
Keyword	String	Keyword for querying (optional)
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the matchmaking list

Input Example

```
https://gpm.tencentcloudapi.com/?Action=DescribeMatches
&PageNumber=1
&PageSize=10
&SearchType=matchCode
&Keyword=match-58mnuqlz
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "Keyword": "match-58mnuqlz",
    "MatchInfoList": [
      {
        "AppId": "1300704415",
        "CreateTime": "2020-09-29 15:24:20",
        "CreateUin": "100012125188",
        "CustomPushData": "test",
        "GameProperties": [
          {
            "Key": "test",
            "Value": "test"
          }
        ],
        "LogSwitch": 1,
        "LogTopicId": "",
        "LogTopicName": "",
        "LogsetId": "",
        "LogsetName": "",
        "MatchCode": "match-58mnuqlz",
        "MatchDesc": "test",
        "MatchName": "test",
        "NotifyUrl": "https://test.com",
        "Region": "ap-shanghai",
        "RuleCode": "rule-r4x6tk49",
        "RuleName": "test",
        "ServerQueue": "gpmtest",
        "ServerRegion": "ap-shanghai",
        "ServerSessionData": "test",
        "ServerType": 1,
        "Tags": [
          {
            "Key": "String",
            "Value": "String"
          }
        ],
```

```
"Timeout": 60,
"Uin": "100012125188"
},
"PageNumber": 1,
"PageSize": 10,
"RequestId": "6e0c3a5d-a8cc-4eaf-bdff-214789ac2326",
"SearchType": "matchCode",
"TotalCount": 1
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
AuthFailure	CAM signature/authentication error
DryRunOperation	The DryRun operation means that the request will be successful, but an extra

	DryRun parameter is passed.
FailedOperation	Operation failed
FailedOperation.CLSFailedOperation	Failed to enable the logging feature. Please submit a ticket.
FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
InternalError	Internal error
InvalidAction	The API does not exist.
InvalidParameter	Parameter error
InvalidParameterValue	Invalid parameter value
InvalidParameterValue.ValueRangeLimit	The value exceeds the range.
LimitExceeded	Quota limit exceeded.
MissingParameter	The parameter is missing.
NoSuchVersion	API version does not exist.
OperationDenied	Operation denied
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceInUse	Occupied resource
ResourceInsufficient	Insufficient resources
ResourceNotFound	Resource not found
ResourceUnavailable	The resource is unavailable.
ResourceUnavailable.CLSServiceNotActivated	The CLS service has not been activated.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.CAMUnauthorizedOperation	It is required to grant the GPM role permissions.
UnauthorizedOperation.UnauthorizedAction	API permission authorization is needed.

UnknownParameter	Unknown parameter error
UnsupportedOperation	Unsupported operation
UnsupportedRegion	The API does not support the region passed in.

DescribeRules

Last updated : 2021-04-06 14:12:03

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to query the rule set list and paginate the query result.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: DescribeRules.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
PageNumber	No	Integer	The current page number. The first page will be returned if this parameter is left empty.
PageSize	No	Integer	The number of rules per page. If this parameter is left empty, 30 rules are displayed per page by default. Maximum value: 30
SearchType	No	String	Query type (optional). Valid values: match (query by

			matchCode or matchName), rule (query by ruleCode or ruleName), and other types (not filtered)
Keyword	No	String	Keyword. Enter a keyword about SearchType to query.
Tags.N	No	Array of Tag	Tags. Enter a tag for querying.

3. Output Parameters

Parameter Name	Type	Description
RuleInfoList	Array of RuleBriefInfo	Rule information list Note: this field may return <code>null</code> , indicating that no valid value is obtained.
TotalCount	Integer	Total number of results
PageNumber	Integer	The current page number
PageSize	Integer	Number of rules per page
SearchType	String	Query type (optional). Valid values: matchName (query by match name), matchCode (query by matchCode), ruleName (query by rule name), and tag (query by tag key/value)
Keyword	String	Keyword for querying (optional)
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the rule list

Input Example

```
https://gpm.tencentcloudapi.com/?Action=DescribeRules
&PageNumber=1
&PageSize=10
&SearchType=ruleCode
```

```
&Keyword=rule-r4x6tk49
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "Keyword": "rule-r4x6tk49",
    "PageNumber": 1,
    "PageSize": 10,
    "RequestId": "a2719713-1ee9-4a67-894a-e776fa52d203",
    "RuleInfoList": [
      {
        "CreateTime": "2020-09-29 10:52:48",
        "MatchCodeList": [
          {
            "Key": "match-74w0ckl8",
            "Value": "test"
          }
        ],
        "RuleCode": "rule-r4x6tk49",
        "RuleName": "test"
      }
    ],
    "SearchType": "ruleCode",
    "TotalCount": 1
  }
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
AuthFailure	CAM signature/authentication error
DryRunOperation	The DryRun operation means that the request will be successful, but an extra DryRun parameter is passed.
FailedOperation	Operation failed
FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
InternalError	Internal error
InvalidAction	The API does not exist.
InvalidParameter	Parameter error
InvalidParameterValue	Invalid parameter value
InvalidParameterValue.RuleNotFound	The rule does not exist.
InvalidParameterValue.ValueRangeLimit	The value exceeds the range.
LimitExceeded	Quota limit exceeded.
MissingParameter	The parameter is missing.
NoSuchVersion	API version does not exist.
OperationDenied	Operation denied
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceInUse	Occupied resource

ResourceInsufficient	Insufficient resources
ResourceNotFound	Resource not found
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.UnauthorizedAction	API permission authorization is needed.
UnknownParameter	Unknown parameter error
UnsupportedOperation	Unsupported operation
UnsupportedRegion	The API does not support the region passed in.

ModifyMatch

Last updated : 2021-04-06 14:12:02

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to modify a match.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: ModifyMatch.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
MatchName	Yes	String	Match name. It can contain up to 128 bytes, supporting [a-zA-Z0-9-.]*.
RuleCode	Yes	String	RuleCode
Timeout	Yes	Integer	Timeout period in seconds. Value range: 1 600
ServerType	Yes	Integer	Whether to request server resources for the

			matchmaking results. 0: no, 1: request GSE resources
MatchCode	Yes	String	MatchCode
MatchDesc	No	String	Matchmaking description. Up to 1024 bytes are allowed.
NotifyUrl	No	String	Only HTTP and HTTPS protocols are supported.
ServerRegion	No	String	Region of the game server queue
ServerQueue	No	String	Game server queue
CustomPushData	No	String	Custom push data
ServerSessionData	No	String	Game server session data
GameProperties.N	No	Array of StringKV	Game attribute. It is an array of key-value structure.
LogSwitch	No	Integer	Enable or disable the log. 0: disable, 1: enable
Tags.N	No	Array of StringKV	Tag. It is an array of key-value structure.

3. Output Parameters

Parameter Name	Type	Description
MatchInfo	MatchInfo	Matchmaking information
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Modifying a match

Input Example

```
https://gpm.tencentcloudapi.com/?Action=ModifyMatch
&MatchName=test
&MatchDesc=test
&RuleCode=rule-r4x6tk49
&Timeout=60
&NotifyUrl=https://test.com
&ServerType=1
&ServerRegion=apshanghai
&ServerQueue=gpmtest
&CustomPushData=test
&ServerSessionData=test
&LogSwitch=1
&MatchCode=match-58mnuqlz
&GameProperties.0.Key=test
&GameProperties.0.Value=test
&Tags.0.Key=String
&Tags.0.Value=String
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "MatchInfo": {
      "AppId": "1300704415",
      "CreateTime": "",
      "CreateUin": "100012125188",
      "CustomPushData": "test",
      "GameProperties": [
        {
          "Key": "test",
          "Value": "test"
        }
      ],
      "LogSwitch": 1,
      "LogTopicId": "",
      "LogTopicName": "",
      "LogsetId": "",
      "LogsetName": "",
      "MatchCode": "match-58mnuqlz",
      "MatchDesc": "test",
      "MatchName": "test",
      "NotifyUrl": "https://test.com",
      "Region": "ap-shanghai",
      "RuleCode": "rule-r4x6tk49",
      "RuleName": "test",
```

```
"ServerQueue": "gpmtest",
"ServerRegion": "ap-shanghai",
"ServerSessionData": "test",
"ServerType": 1,
"Tags": [
{
"Key": "String",
"Value": "String"
}
],
"Timeout": 60,
"Uin": "100012125188"
},
"RequestId": "b6184808-9699-43db-837c-110344620c5d"
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

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- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
------------	-------------

AuthFailure	CAM signature/authentication error
DryRunOperation	The DryRun operation means that the request will be successful, but an extra DryRun parameter is passed.
FailedOperation	Operation failed
FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
FailedOperation.TagsOpeartionFailed	The tagging operation failed
InternalError	Internal error
InvalidAction	The API does not exist.
InvalidParameter	Parameter error
InvalidParameterValue	Invalid parameter value
InvalidParameterValue.MatchNotFound	The matchmaking does not exist.
InvalidParameterValue.RuleNotFound	The rule does not exist.
InvalidParameterValue.TagsLimitPermission	No permission for this tag
InvalidParameterValue.ValueRangeLimit	The value exceeds the range.
LimitExceeded	Quota limit exceeded.
MissingParameter	The parameter is missing.
NoSuchVersion	API version does not exist.
OperationDenied	Operation denied
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceInUse	Occupied resource
ResourceInsufficient	Insufficient resources
ResourceNotFound	Resource not found
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.

UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.CAMUnauthorizedOperation	It is required to grant the GPM role permissions.
UnauthorizedOperation.UnauthorizedAction	API permission authorization is needed.
UnknownParameter	Unknown parameter error
UnsupportedOperation	Unsupported operation
UnsupportedRegion	The API does not support the region passed in.

ModifyRule

Last updated : 2021-04-06 14:12:02

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to modify a rule (including description and tag).

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: ModifyRule.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
RuleCode	Yes	String	RuleCode
RuleName	Yes	String	Rule name. It can only contain numbers, letters, ".", and "-".
RuleDesc	No	String	Rule description. Up to 1024 bytes are allowed.
Tags.N	No	Array of	Tag. It is an array of key-value structure. Up to 50 tags

		StringKV	can be associated.
--	--	----------	--------------------

3. Output Parameters

Parameter Name	Type	Description
RuleInfo	RuleInfo	Rule information
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Modifying a rule

Input Example

```
https://gpm.tencentcloudapi.com/?Action=ModifyRule
&RuleDesc=test
&RuleCode=rule-v879tr24
&RuleName=test
&Tags.0.Key=String
&Tags.0.Value=String
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "c34a20b9-0fba-4c37-8819-c25a271778f6",
    "RuleInfo": {
      "AppId": "1300704415",
      "CreateTime": "2020-09-29 15:15:36",
      "CreateUin": "100012125188",
      "MatchCodeList": [],
      "Region": "ap-shanghai",
      "RuleCode": "rule-v879tr24",
      "RuleDesc": "test",
      "RuleName": "test",
      "RuleScript": "test",
      "Tags": [
```

```
{
  "Key": "String",
  "Value": "String"
},
{
  "Uin": "100012125188"
}
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

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- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
AuthFailure	CAM signature/authentication error
DryRunOperation	The DryRun operation means that the request will be successful, but an extra DryRun parameter is passed.
FailedOperation	Operation failed

FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
FailedOperation.TagsOpeartionFailed	The tagging operation failed
InternalError	Internal error
InvalidAction	The API does not exist.
InvalidParameter	Parameter error
InvalidParameterValue	Invalid parameter value
InvalidParameterValue.RuleNotFound	The rule does not exist.
InvalidParameterValue.ValueRangeLimit	The value exceeds the range.
LimitExceeded	Quota limit exceeded.
MissingParameter	The parameter is missing.
NoSuchVersion	API version does not exist.
OperationDenied	Operation denied
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceInUse	Occupied resource
ResourceInsufficient	Insufficient resources
ResourceNotFound	Resource not found
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter error
UnsupportedOperation	Unsupported operation
UnsupportedRegion	The API does not support the region passed in.

CreateMatch

Last updated : 2021-04-06 14:12:06

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to create a match.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: CreateMatch.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
MatchName	Yes	String	Match name. It can contain up to 128 bytes, supporting [a-zA-Z0-9-.*]*.
RuleCode	Yes	String	RuleCode
Timeout	Yes	Integer	Timeout period in seconds. Value range: 1 600
ServerType	Yes	Integer	Whether to request server resources for the

			matchmaking results. 0: no, 1: request GSE resources
MatchDesc	No	String	Matchmaking description. Up to 1024 bytes are allowed.
NotifyUrl	No	String	Only HTTP and HTTPS protocols are supported.
ServerRegion	No	String	Region of the game server queue
ServerQueue	No	String	Game server queue
CustomPushData	No	String	Custom push data
ServerSessionData	No	String	Game server session data
GameProperties.N	No	Array of StringKV	Game attribute. It is an array of key-value structure.
LogSwitch	No	Integer	Enable or disable the log. 0: disable, 1: enable
Tags.N	No	Array of StringKV	Tag. It is an array of key-value structure.

3. Output Parameters

Parameter Name	Type	Description
MatchInfo	MatchInfo	Matchmaking information
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Creating a match

Input Example

```
https://gpm.tencentcloudapi.com/?Action=CreateMatch
&MatchName=test
&MatchDesc=test
```

```
&RuleCode=rule-r4x6tk49
&Timeout=60
&NotifyUrl=https://test.com
&ServerType=1
&ServerRegion=ap-shanghai
&ServerQueue=gpmtest
&CustomPushData=test
&ServerSessionData=test
&LogSwitch=1
&GameProperties.0.Key=test
&GameProperties.0.Value=test
&Tags.0.Key=String
&Tags.0.Value=String
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "MatchInfo": {
      "AppId": "1300704415",
      "CreateTime": "2020-09-29 15:24:19",
      "CreateUin": "100012125188",
      "CustomPushData": "test",
      "GameProperties": [
        {
          "Key": "test",
          "Value": "test"
        }
      ],
      "LogSwitch": 1,
      "LogTopicId": "",
      "LogTopicName": "",
      "LogsetId": "",
      "LogsetName": "",
      "MatchCode": "match-58mnuqlz",
      "MatchDesc": "test",
      "MatchName": "test",
      "NotifyUrl": "https://test.com",
      "Region": "ap-shanghai",
      "RuleCode": "rule-r4x6tk49",
      "RuleName": "",
      "ServerQueue": "gpmtest",
      "ServerRegion": "ap-shanghai",
      "ServerSessionData": "test",
      "ServerType": 1,
      "Tags": [
```

```
{
  "Key": "String",
  "Value": "String"
},
{
  "Timeout": 60,
  "Uin": "100012125188"
},
{
  "RequestId": "20e5c29d-fa33-45bd-8e90-5b00773fa4cb"
}
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
AuthFailure	CAM signature/authentication error
DryRunOperation	The DryRun operation means that the request will be successful, but an extra

	DryRun parameter is passed.
FailedOperation	Operation failed
FailedOperation.LimitMatchCount	The number of the created matches exceeds the limit.
FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
FailedOperation.TagsOpeartionFailed	The tagging operation failed
InternalError	Internal error
InvalidAction	The API does not exist.
InvalidParameter	Parameter error
InvalidParameterValue	Invalid parameter value
InvalidParameterValue.RuleNotFound	The rule does not exist.
InvalidParameterValue.TagsLimitPermission	No permission for this tag
InvalidParameterValue.ValueRangeLimit	The value exceeds the range.
LimitExceeded	Quota limit exceeded.
MissingParameter	The parameter is missing.
NoSuchVersion	API version does not exist.
OperationDenied	Operation denied
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceInUse	Occupied resource
ResourceInsufficient	Insufficient resources
ResourceNotFound	Resource not found
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.CAMUnauthorizedOperation	It is required to grant the GPM role

	permissions.
UnauthorizedOperation.UnauthorizedAction	API permission authorization is needed.
UnauthorizedOperation.UserUnAuth	The current account has not verified its identity. Please complete identity verification before using the service.
UnknownParameter	Unknown parameter error
UnsupportedOperation	Unsupported operation
UnsupportedRegion	The API does not support the region passed in.

DescribeMatchCodes

Last updated : 2021-04-06 14:12:04

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to query the created MatchCodes and paginate the query result.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: DescribeMatchCodes.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
Offset	Yes	Integer	Offset, number of pages.
Limit	Yes	Integer	The number of MatchCodes per page
MatchCode	No	String	Query by the MatchCode value (a string).

3. Output Parameters

Parameter Name	Type	Description
MatchCodes	Array of MatchCodeAttr	MatchCode Note: this field may return <code>null</code> , indicating that no valid value is obtained.
TotalCount	Integer	The total number of queried MatchCodes Note: this field may return <code>null</code> , indicating that no valid value is obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying a MatchCode and paginating the query result

Input Example

```
https://gpm.tencentcloudapi.com/?Action=DescribeMatchCodes
&Offset=1
&Limit=15
&MatchCode=match-rzsfvf
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "MatchCodes": [
      "match-rzsfvf"
    ],
    "RequestId": "eefe26e0-fc8a-41e4-a9be-69694662c6cc",
    "TotalCount": 0
  }
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
AuthFailure	CAM signature/authentication error
DryRunOperation	The DryRun operation means that the request will be successful, but an extra DryRun parameter is passed.
FailedOperation	Operation failed
FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
InternalError	Internal error
InvalidAction	The API does not exist.
InvalidParameter	Parameter error
InvalidParameterValue	Invalid parameter value

LimitExceeded	Quota limit exceeded.
MissingParameter	The parameter is missing.
NoSuchVersion	API version does not exist.
OperationDenied	Operation denied
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceInUse	Occupied resource
ResourceInsufficient	Insufficient resources
ResourceNotFound	Resource not found
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.UnauthorizedAction	API permission authorization is needed.
UnknownParameter	Unknown parameter error
UnsupportedOperation	Unsupported operation
UnsupportedRegion	The API does not support the region passed in.

DescribeMatch

Last updated : 2021-04-06 14:12:04

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to query the matchmaking details.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: DescribeMatch.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
MatchCode	Yes	String	MatchCode

3. Output Parameters

Parameter	Type	Description
-----------	------	-------------

Name		
MatchInfo	MatchInfo	Matchmaking information Note: this field may return <code>null</code> , indicating that no valid value is obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying a match

Input Example

```
https://gpm.tencentcloudapi.com/?Action=DescribeMatch
&MatchCode=match-58mnuqlz
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "MatchInfo": {
      "AppId": "1300704415",
      "CreateTime": "2020-09-29 15:24:20",
      "CreateUin": "100012125188",
      "CustomPushData": "test",
      "GameProperties": [
        {
          "Key": "test",
          "Value": "test"
        }
      ],
      "LogSwitch": 1,
      "LogTopicId": "",
      "LogTopicName": "",
      "LogsetId": "",
      "LogsetName": "",
      "MatchCode": "match-58mnuqlz",
      "MatchDesc": "test",
      "MatchName": "test",
      "NotifyUrl": "https://test.com",
      "Region": "ap-shanghai",
    }
  }
}
```

```
"RuleCode": "rule-r4x6tk49",
"RuleName": "test",
"ServerQueue": "gpmtest",
"ServerRegion": "ap-shanghai",
"ServerSessionData": "test",
"ServerType": 1,
"Tags": [
{
"Key": "String",
"Value": "String"
}
],
"Timeout": 60,
"Uin": "100012125188"
},
"RequestId": "ab6ab15a-ab3a-495c-8818-e826084ea072"
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
AuthFailure	CAM signature/authentication error
DryRunOperation	The DryRun operation means that the request will be successful, but an extra DryRun parameter is passed.
FailedOperation	Operation failed
FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
InternalError	Internal error
InvalidAction	The API does not exist.
InvalidParameter	Parameter error
InvalidParameterValue	Invalid parameter value
InvalidParameterValue.MatchNotFound	The matchmaking does not exist.
InvalidParameterValue.RuleNotFound	The rule does not exist.
LimitExceeded	Quota limit exceeded.
MissingParameter	The parameter is missing.
NoSuchVersion	API version does not exist.
OperationDenied	Operation denied
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceInUse	Occupied resource
ResourceInsufficient	Insufficient resources
ResourceNotFound	Resource not found
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter error
UnsupportedOperation	Unsupported operation

UnsupportedRegion	The API does not support the region passed in.
-------------------	--

DescribeData

Last updated : 2021-04-06 14:12:05

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to view statistics.

A maximum of 100 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: DescribeData.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
StartTime	Yes	Integer	Start time in seconds
EndTime	Yes	Integer	End time in seconds
TimeType	Yes	Integer	Time granularity. Valid values: 1: 1 day, 2: 1 hour, 3: 1 minute, 4: 10 minutes, 5: 30 minutes
MatchCode	No	String	MatchCode

3. Output Parameters

Parameter Name	Type	Description
OverviewData	ReportOverviewData	Matchmaking statistics overview Note: this field may return <code>null</code> , indicating that no valid value is obtained.
TrendData	ReportTrendData	Trend data of the number of matchmaking requests Note: this field may return <code>null</code> , indicating that no valid value is obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying data

Input Example

```
https://gpm.tencentcloudapi.com/?Action=DescribeData
&MatchCode=match-v87jcr87
&StartTime=1600741736
&EndTime=1601000936
&TimeType=2
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "OverviewData": {
      "AverageSec": 1.91,
      "FailPercent": 2.86,
      "SuccessPercent": 22.86,
      "TimeoutPercent": 40,
      "TotalTimes": "35"
    },
    "RequestId": "024cba11-2f69-40ac-ac14-bbd31b210159",
  },
}
```

```
"TrendData": {
  "CancelList": [
    "0",
    "0",
    "0"
  ],
  "FailList": [
    "0",
    "0",
    "0"
  ],
  "SuccessList": [
    "0",
    "2",
    "0"
  ],
  "TimeList": [
    "1601103600",
    "1601107200",
    "1601110800",
    "1601362800"
  ],
  "TimeoutList": [
    "0",
    "1",
    "0",
    "0"
  ],
  "TotalList": [
    "0",
    "3",
    "0",
    "0"
  ]
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
AuthFailure	CAM signature/authentication error
DryRunOperation	The DryRun operation means that the request will be successful, but an extra DryRun parameter is passed.
FailedOperation	Operation failed
FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
InternalError	Internal error
InvalidAction	The API does not exist.
InvalidParameter	Parameter error
InvalidParameterValue	Invalid parameter value
InvalidParameterValue.MatchCodeNotFound	MatchCode does not exist.
InvalidParameterValue.MatchNotFound	The matchmaking does not exist.
InvalidParameterValue.ValueRangeLimit	The value exceeds the range.
LimitExceeded	Quota limit exceeded.

MissingParameter	The parameter is missing.
NoSuchVersion	API version does not exist.
OperationDenied	Operation denied
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceInUse	Occupied resource
ResourceInsufficient	Insufficient resources
ResourceNotFound	Resource not found
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.UnauthorizedAction	API permission authorization is needed.
UnknownParameter	Unknown parameter error
UnsupportedOperation	Unsupported operation
UnsupportedRegion	The API does not support the region passed in.

CreateRule

Last updated : 2021-04-06 14:12:06

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to create a rule.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: CreateRule.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
RuleName	Yes	String	Rule name. It can contain up to 128 bytes, supporting [a-zA-Z0-9-.*].
RuleScript	Yes	String	Rule script. Up to 65535 bytes are allowed.
RuleDesc	No	String	Rule description. Up to 1024 bytes are allowed.
Tags.N	No	Array of	Tag. It is an array of key-value structure. Up to 50 tags

		StringKV	can be associated.
--	--	----------	--------------------

3. Output Parameters

Parameter Name	Type	Description
RuleInfo	RuleInfo	Rule information
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Creating a match

Input Example

```
https://gpm.tencentcloudapi.com/?Action=CreateRule
&RuleName=test
&RuleDesc=test
&RuleScript=test
&Tags.0.Key=String
&Tags.0.Value=String
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "d49cff57-ac1e-437e-a89e-5372fd6538ed",
    "RuleInfo": {
      "AppId": "1300704415",
      "CreateTime": "2020-09-29 15:15:36",
      "CreateUin": "100012125188",
      "MatchCodeList": [],
      "Region": "ap-shanghai",
      "RuleCode": "rule-v879tr24",
      "RuleDesc": "test",
      "RuleName": "test",
      "RuleScript": "test",
      "Tags": [
```

```
{
  "Key": "String",
  "Value": "String"
},
{
  "Uin": "100012125188"
}
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
AuthFailure	CAM signature/authentication error
DryRunOperation	The DryRun operation means that the request will be successful, but an extra DryRun parameter is passed.

FailedOperation	Operation failed
FailedOperation.LimitRuleCount	The number of the created rules exceeds the limit.
FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
FailedOperation.TagsOpeartionFailed	The tagging operation failed
InternalError	Internal error
InvalidAction	The API does not exist.
InvalidParameter	Parameter error
InvalidParameterValue	Invalid parameter value
InvalidParameterValue.InvalidRuleScript	Incorrect rule script
InvalidParameterValue.RuleNameDuplicated	The rule name already exists.
InvalidParameterValue.TagsLimitPermission	No permission for this tag
InvalidParameterValue.ValueRangeLimit	The value exceeds the range.
LimitExceeded	Quota limit exceeded.
MissingParameter	The parameter is missing.
NoSuchVersion	API version does not exist.
OperationDenied	Operation denied
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceInUse	Occupied resource
ResourceInsufficient	Insufficient resources
ResourceNotFound	Resource not found
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter error

UnsupportedOperation	Unsupported operation
UnsupportedRegion	The API does not support the region passed in.

DeleteMatch

Last updated : 2021-05-17 15:04:13

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to delete a match.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: DeleteMatch.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
MatchCode	Yes	String	MatchCode

3. Output Parameters

Parameter	Type	Description
-----------	------	-------------

Name		
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Deleting a match

Input Example

```
https://gpm.tencentcloudapi.com/?Action=DeleteMatch
&MatchCode=match-58mnuqlz
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "56200c07-6508-469e-ae9c-e11f21eea9ea"
  }
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
AuthFailure	CAM signature/authentication error
DryRunOperation	The DryRun operation means that the request will be successful, but an extra DryRun parameter is passed.
FailedOperation	Operation failed
FailedOperation.CLSFailedOperation	Failed to enable the logging feature. Please submit a ticket.
FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
FailedOperation.TagsOpeartionFailed	The tagging operation failed
InternalError	Internal error
InvalidAction	The API does not exist.
InvalidParameter	Parameter error
InvalidParameterValue	Invalid parameter value
InvalidParameterValue.MatchNotFound	The matchmaking does not exist.
InvalidParameterValue.TagsLimitPermission	No permission for this tag
LimitExceeded	Quota limit exceeded.
MissingParameter	The parameter is missing.
NoSuchVersion	API version does not exist.
OperationDenied	Operation denied
RequestLimitExceeded	The number of requests exceeds the frequency limit.

ResourceInUse	Occupied resource
ResourceInsufficient	Insufficient resources
ResourceNotFound	Resource not found
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.CAMUnauthorizedOperation	It is required to grant the GPM role permissions.
UnknownParameter	Unknown parameter error
UnsupportedOperation	Unsupported operation
UnsupportedRegion	The API does not support the region passed in.

DeleteRule

Last updated : 2021-04-06 14:12:05

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to delete a rule.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: DeleteRule.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
RuleCode	Yes	String	RuleCode

3. Output Parameters

Parameter	Type	Description
-----------	------	-------------

Name		
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Deleting a rule

Input Example

```
https://gpm.tencentcloudapi.com/?Action=DeleteRule
&RuleCode=rule-v879tr24
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "f37c0f52-ed2a-49e0-a574-f075402a1faf"
  }
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see [Common Error Codes](#).

Error Code	Description
AuthFailure	CAM signature/authentication error
DryRunOperation	The DryRun operation means that the request will be successful, but an extra DryRun parameter is passed.
FailedOperation	Operation failed
FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
FailedOperation.TagsOpeartionFailed	The tagging operation failed
InternalError	Internal error
InvalidAction	The API does not exist.
InvalidParameter	Parameter error
InvalidParameterValue	Invalid parameter value
InvalidParameterValue.RuleMatchExistent	There is a match associated with the rule.
InvalidParameterValue.RuleNotFound	The rule does not exist.
InvalidParameterValue.TagsLimitPermission	No permission for this tag
LimitExceeded	Quota limit exceeded.
MissingParameter	The parameter is missing.
NoSuchVersion	API version does not exist.
OperationDenied	Operation denied
RequestLimitExceeded	The number of requests exceeds the frequency limit.

ResourceInUse	Occupied resource
ResourceInsufficient	Insufficient resources
ResourceNotFound	Resource not found
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter error
UnsupportedOperation	Unsupported operation
UnsupportedRegion	The API does not support the region passed in.

DescribeRule

Last updated : 2021-04-06 14:12:03

1. API Description

Domain name for API request: gpm.tencentcloudapi.com.

This API is used to query the rule details.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

[Try it](#)

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see [Common Request Parameters](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: DescribeRule.
Version	Yes	String	Common parameter. The value used for this API: 2020-08-20.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
RuleCode	Yes	String	RuleCode

3. Output Parameters

Parameter	Type	Description
-----------	------	-------------

Name		
RuleInfo	RuleInfo	Rule information Note: this field may return <code>null</code> , indicating that no valid value is obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying a rule

Input Example

```
https://gpm.tencentcloudapi.com/?Action=DescribeRule
&RuleCode=rule-r4x6tk49
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "16a99485-c55a-4202-9302-dc329e710d00",
    "RuleInfo": {
      "AppId": "1300704415",
      "CreateTime": "2020-09-29 10:52:48",
      "CreateUin": "100012125188",
      "MatchCodeList": [
        {
          "Key": "match-74w0ckl8",
          "Value": "test"
        }
      ],
      "Region": "ap-shanghai",
      "RuleCode": "rule-r4x6tk49",
      "RuleDesc": "test",
      "RuleName": "test",
      "RuleScript": "1",
      "Tags": [],
      "Uin": "100012125188"
    }
  }
}
```

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FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
InternalError	Internal error
InvalidAction	The API does not exist.
InvalidParameter	Parameter error

InvalidParameterValue	Invalid parameter value
InvalidParameterValue.RuleNotFound	The rule does not exist.
LimitExceeded	Quota limit exceeded.
MissingParameter	The parameter is missing.
NoSuchVersion	API version does not exist.
OperationDenied	Operation denied
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceInUse	Occupied resource
ResourceInsufficient	Insufficient resources
ResourceNotFound	Resource not found
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter error
UnsupportedOperation	Unsupported operation
UnsupportedRegion	The API does not support the region passed in.

Data Types

Last updated : 2021-05-17 15:04:13

AttributeMap

The map key and map value of the player attribute

Used by actions: DescribeMatchingProgress, StartMatching, StartMatchingBackfill.

Name	Type	Required	Description
Key	String	Yes	Map key, supporting [a-zA-Z0-9-.]*
Value	Integer	Yes	Map value

MTicket

The combination of MatchCode and MatchTicket ID.

Used by actions: DescribeMatchingProgress.

Name	Type	Required	Description
MatchCode	String	Yes	MatchCode
MatchTicketId	String	Yes	MatchTicket ID

MatchAttribute

Player attributes for matching

Used by actions: DescribeMatchingProgress, StartMatching, StartMatchingBackfill.

Name	Type	Required	Description
Name	String	Yes	Attribute name. It can contain up to 128 characters, supporting [a-zA-Z0-9-.]*.
Type	Integer	Yes	Attribute type. 0: number, 1: string. Default value: 0

NumberValue	Float	No	Numeric attribute value. Default value: 0.0
StringValue	String	No	String attribute value. Up to 128 characters are allowed. Default value: ""
ListValue	Array of String	No	List attribute value
MapValue	Array of AttributeMap	No	Map attribute value

MatchCodeAttr

MatchCode

Used by actions: DescribeMatchCodes.

Name	Type	Description
MatchCode	String	MatchCode Note: this field may return <code>null</code> , indicating that no valid value is obtained.

MatchInfo

Matchmaking information

Used by actions: CreateMatch, DescribeMatch, DescribeMatches, ModifyMatch.

Name	Type	Required	Description
MatchCode	String	Yes	MatchCode
MatchName	String	Yes	Match name
MatchDesc	String	Yes	Matchmaking description Note: this field may return <code>null</code> , indicating that no valid value is obtained.
RuleCode	String	Yes	RuleCode
CreateTime	String	Yes	Creation time
Timeout	Integer	Yes	Timeout period

NotifyUrl	String	Yes	Receiving notification address
ServerType	Integer	Yes	Whether to request server resources for the match results. 0: no, 1: request GSE resources
ServerRegion	String	Yes	Region of the server queue Note: this field may return <code>null</code> , indicating that no valid value is obtained.
ServerQueue	String	Yes	Server queue Note: this field may return <code>null</code> , indicating that no valid value is obtained.
CustomPushData	String	Yes	Custom push data Note: this field may return <code>null</code> , indicating that no valid value is obtained.
ServerSessionData	String	Yes	Game server session data Note: this field may return <code>null</code> , indicating that no valid value is obtained.
GameProperties	Array of StringKV	Yes	Game attributes Note: this field may return <code>null</code> , indicating that no valid value is obtained.
LogSwitch	Integer	Yes	Enable or disable the log. 0: disable, 1: enable
LogsetId	String	Yes	Logset ID Note: this field may return <code>null</code> , indicating that no valid value is obtained.
LogsetName	String	Yes	Logset name Note: this field may return <code>null</code> , indicating that no valid value is obtained.
LogTopicId	String	Yes	Log topic ID Note: this field may return <code>null</code> , indicating that no valid value is obtained.
LogTopicName	String	Yes	Log topic name Note: this field may return <code>null</code> , indicating that no valid value is obtained.
Tags	Array of StringKV	Yes	Tag Note: this field may return <code>null</code> , indicating that no valid value is obtained.

Region	String	Yes	Region Note: this field may return <code>null</code> , indicating that no valid value is obtained.
AppId	String	Yes	User AppId Note: this field may return <code>null</code> , indicating that no valid value is obtained.
Uin	String	Yes	User root account UIN Note: this field may return <code>null</code> , indicating that no valid value is obtained.
CreateUin	String	Yes	Create user account UIN Note: this field may return <code>null</code> , indicating that no valid value is obtained.
RuleName	String	Yes	Rule Name Note: this field may return <code>null</code> , indicating that no valid value is obtained.
LogStatus	Integer	No	Log status. 0: normal, 1: the log set does not exist, 2: the log topic does not exist, 3: neither the log set nor the log topic exists. Note: this field may return <code>null</code> , indicating that no valid value is obtained.

MatchTicket

MatchTicket information

Used by actions: DescribeMatchingProgress, StartMatchingBackfill.

Name	Type	Description
Id	String	MatchTicket ID. It can contain up to 128 characters, supporting [a-zA-Z0-9-.*].
MatchCode	String	MatchCode
MatchResult	String	Different structure serialized results will be returned according to the MatchType. Note: this field may return <code>null</code> , indicating that no valid value is obtained.
MatchType	String	Matchmaking type. Valid values: NORMAL, GSE

		Note: this field may return <code>null</code> , indicating that no valid value is obtained.
Players	Array of Player	Player information list
Status	String	Matching status. Valid values: SEARCHING (matching), PLACING (pending match), COMPLETED (match completed), CANCELLED (match cancelled), TIMEDOUT (match timeouts), FAILED (match failed)
StatusMessage	String	Matching status descriptions Note: this field may return <code>null</code> , indicating that no valid value is obtained.
StatusReason	String	Reason for the matching status Note: this field may return <code>null</code> , indicating that no valid value is obtained.
StartTime	String	The time when the GPM received the matchmaking request, for example "2020-08-17T08:14:38.077Z".
EndTime	String	The time when the matchmaking request stopped executing due to the completion, failure, timeout, or cancellation, for example "2020-08-17T08:14:38.077Z". Note: this field may return <code>null</code> , indicating that no valid value is obtained.

Player

Player information

Used by actions: DescribeMatchingProgress, StartMatching, StartMatchingBackfill.

Name	Type	Required	Description
Id	String	Yes	Player ID. It can contain up to 128 characters, supporting [a-zA-Z\d-._]*.
Name	String	Yes	Player nickname. Up to 128 characters are allowed.
MatchAttributes	Array of MatchAttribute	Yes	Player attribute for matching. Up to 10 attributes are supported.

Team	String	No	Team name. A player can pass in a different team name, which can contain up to 128 characters, and support [a-zA-Z0-9-.*].
CustomPlayerStatus	Integer	No	Custom player status. This parameter will be passed through. Value range: [0, 99999]
CustomProfile	String	No	Custom player information. Up to 1024 characters are allowed. This parameter will be passed through.
RegionLatencies	Array of RegionLatency	No	Number of delays in each area. Up to 20 delays are supported.

RegionLatency

The network delay time for players to reach different regions.

Used by actions: DescribeMatchingProgress, StartMatching, StartMatchingBackfill.

Name	Type	Required	Description
Region	String	Yes	Region ap-beijing North China (Beijing) ap-chengdu Southwest China (Chengdu) ap-guangzhou South China (Guangzhou) ap-hongkong Hong Kong/Macao/Taiwan (Hong Kong, China) ap-seoul Asia Pacific (Seoul) ap-shanghai East China (Shanghai) ap-singapore Southeast Asia (Singapore) eu-frankfurt Europe (Frankfurt) na-siliconvalley Western US (Silicon Valley) na-toronto North America (Toronto) ap-mumbai Asia Pacific (Mumbai) na-ashburn Eastern US (Virginia) ap-bangkok Asia Pacific (Bangkok) eu-moscow Europe (Moscow) ap-tokyo Asia Pacific (Tokyo)
Latency	Integer	Yes	Delay time in ms. Value range: 0 - 999999

ReportOverviewData

Matchmaking statistics overview

Used by actions: DescribeData.

Name	Type	Description
TotalTimes	String	Total count
SuccessPercent	Float	Success rate
TimeoutPercent	Float	Timeout rate
FailPercent	Float	Failure rate
AverageSec	Float	Average matching time

ReportTrendData

Trend data

Used by actions: DescribeData.

Name	Type	Description
TotalList	Array of String	Total count
CancelList	Array of String	Number of requests cancelled
SuccessList	Array of String	Number of successes
FailList	Array of String	Number of failures
TimeoutList	Array of String	Number of request timeout
TimeList	Array of String	Time array in seconds

RuleBriefInfo

Brief rule information

Used by actions: DescribeRules.

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Name	Type	Description
RuleName	String	Rule name. It supports [a-zA-Z\d-.*].
MatchCodeList	Array of StringKV	The associated match
CreateTime	String	Creation time
RuleCode	String	RuleCode

RuleInfo

Rule information

Used by actions: CreateRule, DescribeRule, ModifyRule.

Name	Type	Description
RuleName	String	Rule name. It supports [a-zA-Z0-9-.*].
CreateTime	String	Creation time
RuleDesc	String	Rule description Note: this field may return <code>null</code> , indicating that no valid value is obtained.
RuleScript	String	Rule script
Tags	Array of StringKV	Tag Note: this field may return <code>null</code> , indicating that no valid value is obtained.
MatchCodeList	Array of StringKV	The associated match Note: this field may return <code>null</code> , indicating that no valid value is obtained.
RuleCode	String	RuleCode
Region	String	Region Note: this field may return <code>null</code> , indicating that no valid value is obtained.
AppId	String	User AppId Note: this field may return <code>null</code> , indicating that no valid value is obtained.

Uin	String	User UIN Note: this field may return <code>null</code> , indicating that no valid value is obtained.
CreateUin	String	User OwnerUin Note: this field may return <code>null</code> , indicating that no valid value is obtained.

StringKV

Key-value structure. Both key and value are string types.

Used by actions: CreateMatch, CreateRule, DescribeMatch, DescribeMatches, DescribeRule, DescribeRules, ModifyMatch, ModifyRule.

Name	Type	Required	Description
Key	String	Yes	Key
Value	String	Yes	Value

Tag

Tag key-value pair

Used by actions: DescribeMatches, DescribeRules.

Name	Type	Required	Description
TagKey	String	Yes	Tag key
TagValue	String	Yes	Tag value

Error Codes

Last updated : 2021-05-17 15:04:14

Feature Description

If there is an Error field in the response, it means that the API call failed. For example:

```
{
  "Response": {
    "Error": {
      "Code": "AuthFailure.SignatureFailure",
      "Message": "The provided credentials could not be validated. Please check your signature is correct."
    },
    "RequestId": "ed93f3cb-f35e-473f-b9f3-0d451b8b79c6"
  }
}
```

Code in Error indicates the error code, and Message indicates the specific information of the error.

Error Code List

Common Error Codes

Error Code	Description
ActionOffline	This API has been deprecated.
AuthFailure.InvalidAuthorization	Authorization in the request header is invalid.
AuthFailure.InvalidSecretId	Invalid key (not a TencentCloud API key type).
AuthFailure.MFAFailure	MFA failed.
AuthFailure.SecretIdNotFound	Key does not exist. Check if the key has been deleted or disabled in the console, and if not, check if the key is correctly entered. Note that whitespaces should not exist before or after the key.
AuthFailure.SignatureExpire	Signature expired. Timestamp and server time cannot differ by more than five minutes. Please ensure your current local time matches the standard time.

AuthFailure.SignatureFailure	Invalid signature. Signature calculation error. Please ensure you've followed the signature calculation process described in the Signature API documentation.
AuthFailure.TokenFailure	Token error.
AuthFailure.UnauthorizedOperation	The request is not authorized. For more information, see the CAM documentation.
DryRunOperation	DryRun Operation. It means that the request would have succeeded, but the DryRun parameter was used.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidAction	The API does not exist.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Invalid parameter value.
InvalidRequest	The multipart format of the request body is incorrect.
LimitExceeded	Quota limit exceeded.
MissingParameter	A parameter is missing.
NoSuchProduct	The product does not exist.
NoSuchVersion	The API version does not exist.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestSizeLimitExceeded	The request size exceeds the upper limit.
ResourceInUse	Resource is in use.
ResourceInsufficient	Insufficient resource.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	Resource is unavailable.
ServiceUnavailable	Service is unavailable now.
UnauthorizedOperation	Unauthorized operation.
UnknownParameter	Unknown parameter.

UnsupportedOperation	Unsupported operation.
UnsupportedProtocol	HTTP(S) request protocol error; only GET and POST requests are supported.
UnsupportedRegion	API does not support the requested region.

Service Error Codes

Error Code	Description
AuthFailure	CAM signature/authentication error
FailedOperation.CLSFailedOperation	Failed to enable the logging feature. Please submit a ticket.
FailedOperation.FrequencySamePlayerLimited	Frequency limit. The interval between the player's repeated request for matchmaking shall not be less than 100 ms.
FailedOperation.LimitMatchCount	The number of the created matches exceeds the limit.
FailedOperation.LimitRuleCount	The number of the created rules exceeds the limit.
FailedOperation.ServiceUnavailable	System error. If you cannot solve the problem, please submit a ticket.
FailedOperation.TagsOpeartionFailed	The tagging operation failed
InvalidParameterValue.GameServerSessionRepeated	A GameServerSession is in progress. Start another session until this one is completed.
InvalidParameterValue.InvalidRuleScript	Incorrect rule script
InvalidParameterValue.MatchCodeNotFound	MatchCode does not exist.
InvalidParameterValue.MatchFeildValueLimit	The length of field value exceeds the limit.
InvalidParameterValue.MatchInvalidCharacters	Field contains invalid characters.
InvalidParameterValue.MatchNotFound	The matchmaking does not exist.
InvalidParameterValue.MatchPlayersLimit	The number of players exceeds the

	limit.
InvalidParameterValue.MatchPlayersRepeated	The player ID already exists.
InvalidParameterValue.MatchStatusNotPermitCancel	The matchmaking cannot be canceled under the current status.
InvalidParameterValue.MatchTicketIdNotFound	The MatchTicket ID does not exist.
InvalidParameterValue.MatchTicketIdRepeated	The MatchTicket ID already exists.
InvalidParameterValue.MatchTicketLimit	The length of MatchTicket list exceeds the limit.
InvalidParameterValue.RuleMatchExistent	There is a match associated with the rule.
InvalidParameterValue.RuleNameDuplicated	The rule name already exists.
InvalidParameterValue.RuleNotFound	The rule does not exist.
InvalidParameterValue.TagsLimitPermission	No permission for this tag
InvalidParameterValue.TokenCompatibleSpanInvalid	The CompatibleSpan of the token exceeds the limit.
InvalidParameterValue.TokenLimit	The token length exceeds the limit.
InvalidParameterValue.ValueRangeLimit	The value exceeds the range.
LimitExceeded.TokenUpdateExceed	The token update frequency exceeds the limit.
OperationDenied	Operation denied
ResourceUnavailable.CLSServiceNotActivated	The CLS service has not been activated.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation.CAMUnauthorizedOperation	It is required to grant the GPM role permissions.
UnauthorizedOperation.UnauthorizedAction	API permission authorization is needed.
UnauthorizedOperation.UserUnAuth	The current account has not verified its identity. Please complete identity verification before using the service.